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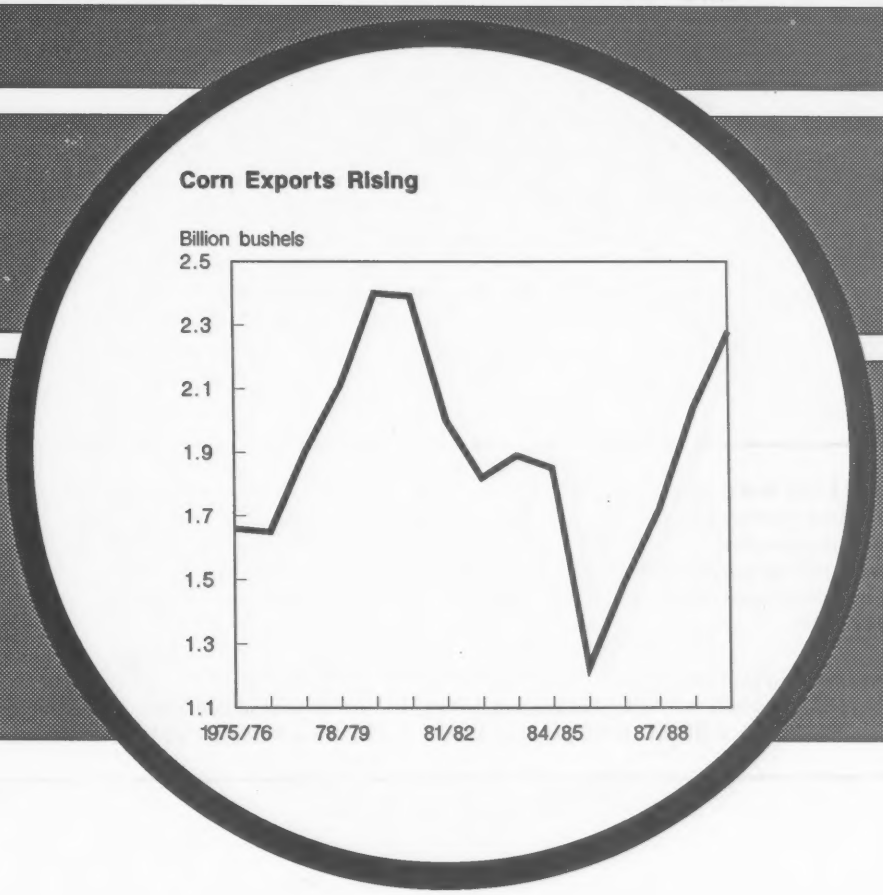

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Summary

U.S. 1989/90 corn exports are forecast up 12 percent from a year earlier. Domestic use is forecast 9 percent above 1988/89 as food, seed, and industrial (FSI) use is up 5 percent and feed and residual disappearance up 11 percent. Although 1989 corn production is 2.6 billion bushels above 1988, total use is expected to exceed the expanded output by more than 450 million bushels. Thus, ending stocks, which are forecast at 1.48 billion bushels, will fall below 1.5 billion bushels for the first time since 1983/84. The tight stocks mean that corn prices will be sensitive to weather conditions that may affect the planting and development of the 1990 corn crop.

The 1989/90 feed grain supply (corn, sorghum, barley, and oats), on an aggregate crop year basis, is expected to be 1 percent above a year earlier. Use is expected to be up 9 percent, led by larger feed and residual use and exports. As a result, ending stocks may drop 25 percent from a year earlier. However, the weighted average price received by farmers likely will average $7-$15 a metric ton below 1988/89's $102.

The 1989/90 sorghum supply is forecast at 1.1 billion bushels, 15 percent below last year, even though production is up 7 percent. Use is expected to be down only 10 million bushels from last year as increased feed and residual disappearance is largely offset by lower exports and FSI use. Ending stocks are forecast down about 40 percent to the lowest since 1980/81. Farm prices are expected to average 3-12 percent below last year's $2.27.

Barley supplies for 1989/90 are down slightly from last year. A 40-percent increase in production was more than offset by lower beginning stocks and imports. Use is expected to be up 30 million bushels, dropping ending stocks to 155 million, the lowest since 1981/82. The farm price is expected to average $2.40-$2.50 a bushel, compared with $2.80 last year.

Oats are being priced more like a feed grain again in 1989/90, after being priced out of many feed uses for the past 2 years. The oats supply is forecast up 35 percent because of a 72-percent rise in production. Food use may increase 10 million bushels, but feed and residual disappearance is forecast to be up 100 million bushels. The farm price will be around $1.10 a bushel below last year's $2.61.

Hay and silage supplies in 1989/90 have not been rebuilt to 1987/88 levels, but are up from last year. The supply per roughage consuming animal unit is 3.3 tons, up 7 percent. Hay stocks last December 1 totaled 101.2 million tons, almost 11 million above a year earlier. Stocks are expected to be adequate to meet livestock needs this winter without pressuring prices. Although the price received by farmers for all hay for the first 9 months of the marketing year is up about $3 a ton from a year earlier, the December-January average was down $6.

FSI use of corn in 1989/90 is expected to be up nearly 5 percent from 1988/89, mostly in the wet milling industry. Soft drink sales are expected to rebound, raising the demand for high fructose corn syrup. Also, the recently announced export sale of alcohol to Brazil will boost ethanol production.

Sharply increased exports during September-December 1989 severely strained the transportation system. Generally much of the grain exported would be moved by barge to the Gulf ports for ocean shipment. However, low water and cold weather on the Mississippi River effectively closed the river for a period in December. With barge traffic limited, shippers turned to rail. This January, average rail car loadings were 34 percent above September, with rail deliveries to ports up 114 percent. In coming months, the rail car situation is expected to improve.

World trade in coarse grains is projected to rise 6 percent in 1989/90, the second straight significant increase. The increase stems from continued Soviet imports and gains in a number of other countries. The United States is expected to pick up most of the growth in world trade in 1989/90.

World coarse grain production is forecast at 800 million tons, up 10 percent from 1988/89 with the United States accounting for most of the increase. World consumption is expected to rise about 4 percent to a record 825 million tons, with the United States contributing about half the increase. World stocks would decline about 25 million tons to the lowest since 1983/84.

The fast pace of political change in Eastern Europe in recent months raises questions about the region's production and trade prospects. Eastern Europe's coarse grain production in 1989/90 is estimated at 65.8 million tons, up 10 percent from the previous year. However, imports are expected to rise to 6.2 million tons, the highest since 1980/81. These imports are expected to contribute to increased consumption. Eastern Europe's exports are likely to only match last year's 700,000 tons, which were the lowest in 30 years.

Administration Proposals for the 1990 Farm Bill

The Food Security Act of 1985 provided the legal basis for farm programs for the period 1986-1990. Unless a new farm bill is passed in 1990, farm programs in 1991 will revert to the base legislation of 1938 and 1949. The administration has made numerous proposals including, but not limited to, the following for price and income support for feed grains for the new farm bill. These proposals treat four aspects of the present legislation covering price and income supports. These four aspects are: 1) planting flexibility, 2) loan rates, 3) triggered programs, and 4) grain reserves and stocks policy.

Planting Flexibility

- Establish a Normal Crop Acreage (NCA) which would be the sum of a farmer's bases of program crops (wheat, feed grains, upland and long staple cotton, and rice) plus historical plantings of oilseeds (soybeans, sunflowers, and rapeseed, including canola).
- Acreage reduction programs (ARPs) would be announced for individual program crops when necessary. The area to be idled would be a percent of the individual crop base.
- Payment acres for each crop would be the base less the acres to be idled under an ARP.
- To qualify for program benefits for any target price crop, the producer would have to comply with the ARP requirements on his program crops. Also the sum of NCA crop plantings plus idled acreage could not exceed the NCA for his farm.
- Under the proposed legislation any program crop and oilseeds could be planted and harvested on a crop's payment acres without loss of deficiency payments or base history. Conserving crops may be planted but not harvested. The planting of certain alternative nonprogram crops may be permitted, but producers would forego deficiency payments on such acreage.
- The program crop, conserving crops, experimental crops and industrial crops (but not other program crops or oilseeds) could be planted and harvested on acres idled under the crop ARP. For each acre of program crop planted and harvested on ARP acreage, the producer would forego an acre of deficiency payments. For each acre planted and harvested of conserving, experimental, or industrial crops, the producer would forego a dollar value of deficiency payments by prorating across program crops.
- If needed to provide adequate supplies, producers may be permitted to plant 105 percent of a crop base. If needed to reduce excessive supplies of a program crop, that crop may be excluded from the NCA and treated with a specific acreage reduction program.
- Crop bases would be a 5-year moving average of acres planted and considered planted. A producer eligible for payments from one or more program crops cannot build base of any NCA crop.
- Program yields would be frozen at the 1990 level.

As a result of these proposed changes, plantings of program crops and oilseeds would tend to be based on market prices, crop yields, and variable cost per acre.

Loan Rates

In the past, the loan rates for corn have been set at 75-85 percent of the average price received by producers for the previous 5 years, excluding the high and low years. The loan rate may not be reduced by more than 5 percent in any year. The Secretary of Agriculture may further reduce the above determined loan rate by 20 percent if necessary to maintain export and domestic markets. The loan rates for barley, grain sorghum, and oats are set in relation to corn. No changes are proposed for loan rates for feed grains.

Triggered Acreage Reduction Programs

Currently the ARP for feed grains is 0-12.5 percent if carryin stocks are 2 billion bushels or less, and 12.5-20 percent if carryin stocks of corn exceed 2 billion bushels. The administration proposes to change this trigger to a stocks-to-use basis. If the ending stocks-to-use ratio for corn for the preceding marketing year is estimated to be 25 percent or less, the ARP would be set in the range 0-12.5 percent. If the estimated stocks-to-use ratio exceeds 25 percent, the ARP would be 12.5-20.0 percent.

Grain Reserves and Stocks Policy

- Regular Commodity Credit Corporation (CCC) loans would continue as in current law. Loans will be for 9 months with authority for extensions if market conditions warrant.
- Commodities acquired by the CCC through price support activities could not be resold at a market prices less than 110 percent of the support price. The relationship between CCC resale authority and the Farmer Owned Reserve (FOR) would be eliminated.
- The FOR program would be revised to replace the 3-5 year contract with 9-12 month contracts. The incentive to enter the FOR would be a fixed storage payment paid in quarterly installments. Grain under CCC loans could be placed in the FOR but would not be required as a condition of entry. A maximum of 600 million bushels of feed grains would be allowed in the FOR. No price or quantity trigger would be set for the FOR. Farmers would be free to decide when to enter or remove grain from the FOR, but the Secretary would have discretion to cancel storage payments when prices exceed 140 percent of the loan rate.

Feed Grain Program for 1990

The acreage reduction (ARP) for 1990 crop corn, grain sorghum, and barley is 10 percent and for oats 5 percent. The 50/92 and 0/92 options are included but there is no paid land diversion (PLD) option in the 1990 program. Also, farmers will be able to sign up to shift 0-25 percent of their permitted acreage to oilseed crops (soybeans, sunflowers, and safflower) without loss of base.

Other provisions are:

- Target prices are $2.75 for corn, $2.61 for sorghum ($4.66 cwt), $2.36 for barley, and $1.45 for oats.
- Loan and purchase rates are $1.57 for corn, $1.49 for sorghum ($2.66 cwt), $1.28 for barley, and $0.81 for oats.
- Barley and oat bases will be split for the 1990 crop.
- Oats will not be subject to limited cross compliance provisions.
- Signup dates for the 1990 program are January 16 through April 13, 1990.
- Advanced deficiency payments will be made in cash on the basis of the projected deficiency payment rates. However, cash payments will be further reduced by 1.4 percent, as required by the Budget and Emergency Deficit Control Act of 1985.

	Projected deficiency payment rate	40 % of projected payment rate	1.4 percent assessment	Advanced deficiency payment rate
	Dollars per bushel			
Corn	.90	.36	.0233	.3367
Sorghum	.91	.364	.0221	.3419
Barley	.26	.104	.0200	.0840
Oats	0	0	0	0

- Deficiency payment rates for producers on acreage devoted to conserving use under the optional 0/92 program will not be less than the projected deficiency payment rates shown above.

Producers who participate in 0/92 or 50/92 provisions of the 1990 commodity price support adjustment program may plant certain approved nonprogram crops on land designated as conserving use (CU) acreage. The approved crops cannot be grown on land designated as Conservation Reserve Program (CRP) acreage. The selected crops are: sunflower, flax, rapeseed (including canola), safflower, castor beans, mustard seed, crambe, triticale, quinoa, Jerusalem artichoke, kenaf, milkweed, amaranth, and psyllium. As a condition for the option to plant these crops on CU or 0-50/92 acreage, the producers must agree to forego any deficiency payments that would otherwise be paid on such acreage.

Feed Grain Supply and Use

The feed grain supply for 1989/90, on an aggregate crop year basis, is estimated at 288 million metric tons, up 1 percent from a year earlier. Beginning stocks of 65.9 million metric tons were 51 percent below 1988/89. Offsetting the low carryin stocks was a 48-percent gain in output to 221.1 million tons. The larger crops resulted from a 13-percent increase in harvested acreage and a 31-percent increase in yield per harvested acre. Imports in 1989/90 may be down 8 percent from a year earlier, mainly from reductions in barley and oats.

The price for feed grains, weighted by forecast use, likely will average between $87 and $95 per metric ton, down from nearly $102 in 1988/89. Use is projected to total almost 239 million metric tons, up 9 percent. Feed and residual disappearance is forecast to account for a big portion of the increase, up nearly 12 percent from 1988/89. Exports, boosted by the additional corn trade with Eastern bloc countries this year, are forecast to be up 8 percent.

Food, seed and industrial (FSI) uses likely will be up nearly 4 percent from a year earlier. FSI use of corn and oats probably will rise while barley use may remain about the same and sorghum use is expected to be down because less sorghum has been used in distilling recently. FSI use of corn has been stimulated by a recent export sale of fuel alcohol. FSI use of oats continues to benefit from expansion of food products containing oats.

Based on expected disappearance in 1989/90, ending stocks may be down 25 percent from a year earlier to 49.5 million metric tons. Ending stocks at this level would represent about one-third of 1986/87's 152 million metric tons, but still well above 1983/84 ending stocks of 39.6 million tons.

June-May Supply and Use

A more consistent set of market factors apply if a June/May feed year is used. The June/May supply for 1989/90 totals 329 million metric tons, nearly the same as the 328 million in 1988/89. June 1, 1989, stocks totaled 107 million tons, 40 percent less than a year earlier. Production is the same as for the aggregate crop-year basis, 221 million tons, and imports are expected to total about 1.1 million. Forecast exports are slightly higher than in the aggregate crop year at 66.6 million tons, up 12 percent from a year earlier.

Use for the June-May 1989/90 crop year is expected to total 237 million tons, up 7 percent from 1988/90. Ending stocks on May 31, 1990, are expected to total 92 million tons, down 14 percent from the previous year. These ending stocks would represent 4.6 months of use at the 1989/90 monthly rate.

Corn

The corn supply for 1989/90 is estimated at 9.46 billion bushels. Beginning stocks on September 1, 1989, totaled 1.9 bil-

Table 1--Forecasts of area, yield, and production of corn

Month	Indicated area harvested mil. acres	Estimated yield bu./acre	Indicated production mil. bu.
August	65.2	112.8	7,348.2
September	65.2	112.4	7,321.0
October	65.1	114.4	7,448.9
November	65.1	116.6	7,589.7
January	64.8	116.2	7,527.2

lion bushels and the 1989 crop was reported at a little over 7.5 billion in the *Crop Production—1989 Summary* released January 11, 1990. Imports may add about 2 million bushels to supply. The 1988/89 supply was nearly 9.2 billion bushels, but was comprised of beginning stocks totaling nearly 4.3 billion bushels.

Based on conditions around August 1, the corn crop was estimated at 7.3 billion bushels. Crop development lagged behind normal in most of the major producing States during August, and as a result the crop estimate was reduced 27 million bushels on September 1. Even though the crop continued to lag behind normal during September, the October estimate was up from September and back to near the August estimate. Over 80 percent of the crop was harvested by the time of the November estimate, which reflected a generally better crop than had been expected earlier, nearly 7.6 million bushels.

The *Crop Production—1989 Summary* was based on a quarterly agricultural survey taken the first half of December 1989. The survey demonstrated that yields were lower than expected in November, but higher than earlier in the year. It also showed that area harvested was slightly lower.

Based on conditions in November, and the November crop report, disappearance for 1989/90 was estimated at 7.6 billion bushels—nearly 5.5 billion domestic use and almost 2.15 billion exports. Ending stocks were expected to be 1.9 billion bushels with the average farm price ranging from $2.00 to $2.40 a bushel. In addition to the reduced production estimate indicated in the January crop report, disappearance has been increased 355 million bushels, thus lowering the projected ending stocks to slightly below 1.5 billion bushels and increasing price expectations to $2.20-$2.40 a bushel.

In February the export forecast for the year was raised 125 million bushels to 2,275 million. The larger forecast corn exports were due to three factors: (1) Larger than expected imports by Eastern Europe, Mexico, and several other countries, (2) Reduced export potential for China, South Africa, and Argentina, and (3) A shift from sorghum to corn because of expected smaller forecast sorghum exports by China.

First-Quarter Disappearance Up

Disappearance during the September-November quarter totaled nearly 2.4 billion bushels, up 12 percent from a year earlier. Exports surged 22 percent to 582 million bushels as a result of the rapid pace of shipments to the USSR. Feed and residual use, at nearly 1.5 billion bushels, was up 11 percent. Food, seed, and industrial (FSI) use, at 300 million bushels, was up 2 percent from a year earlier.

The feed and residual disappearance for the first quarter was larger than expected, so in January forecast disappearance for the year was raised 200 million bushels to 4.4 billion. The first-quarter use may overstate the actual feed use because of an increase in grain in transit, which is not accounted for in either the stock report or in exports and FSI use. The increased grain in transit primarily resulted from increased export movement this year (larger pipeline stocks) but also because of the transportation problems on the Mississippi River last fall. Barge traffic was slowed by low water and damage to lock and dam 26, so a longer time in transit was required and barge rates were bid up by the demand for barges.

Figure 1
Monthly Average Corn Prices

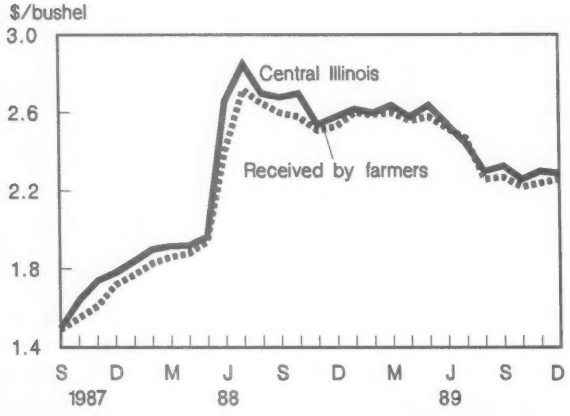


Table 2--Corn supply and disappearance, September - November

Item	1988/89	1989/90
	Million bushels	
Supply		
Stocks Sept. 1	4,259.1	1,930.4
CCC	835	362.5
FOR	1,127	724.6
Loan	929	339.0
Free	1,368	504.3
Production	4,928.7	7,527.2
Imports	.6	.6
Total	9,188.4	9,458.2
Disappearance		
FSI	294.0	300.0
Exports	478.4	582.3
Feed and residual	1,344.4	1,496.8
Total	2,116.8	2,379.1
Ending Stocks Dec. 1	7,071.6	7,079.1
CCC	611.0	628.2
FOR	1,077.4	468.4
Loan	747.9	492.7
Free	4,635.3	5,489.8

The higher cost of shipping on the Mississippi increased the amount of corn shipped by rail. For example, inspections for export the week ending December 1, 1989, at the Great Lakes, Atlantic Coast, Pacific Coast ports, and interior points totaled 26.6 million bushels, compared with 13.5 million bushels on November 30, 1988. Water levels are greatly improved on the Mississippi, and lock and dam 26 has been replaced with a new complex of larger capacity. This may have some effect on pipeline stocks and the stocks report for March.

In January, Archer Daniels Midland announced a contract to supply 100 million gallons of ethanol to Brazil with the alcohol to be produced in wet-milling plants in Illinois and Iowa. Because of this information, the FSI use for 1989/90 was raised to 1,305 million bushels. It is expected that most of the increase will come in the March-May quarter, but some in December-February and June-August.

Nearly 7.1 billion bushels of corn were in farm and off-farm storage on December 1, about the same as last year. About 1.1 billion bushels were tied up in CCC inventory, the FOR, and special producer storage loans (SPSL), leaving nearly 6 billion bushels in 9-month loans and unencumbered stocks. However, at current prices, most of the corn under regular loans would be readily available to the market.

Disappearance for the 1989/90 crop year is estimated at nearly 8 billion bushels, with 2.4 billion used in the first quarter, leaving about 5.6 billion to be used in the remainder of the year. It therefore appears that market needs are below uncommitted stocks on December 1. However, some of the CCC and FOR/SPSL stocks will become available to the market during the year. These include use of CCC stocks to meet disaster relief obligations, generic certificate exchanges, catalog sales, sale of CCC acquisitions that are no longer of storable quality, and rotation of FOR stocks next summer. As of February 1, 1990, CCC and FOR stocks had dropped 89 million bushels from December 1 levels.

The outlook for lower 1989/90 ending stocks means that prices will be more sensitive to extreme weather conditions and even could rise sufficiently to trigger the FOR if a serious drought develops this summer. The price of corn will likely rise seasonally until early July as weather conditions and crop prospects become increasingly important market factors.

In late January, subsoil moisture was low in parts of Iowa, Nebraska, Minnesota, Wisconsin, and Illinois. In much of Iowa and western Illinois, it is estimated that more than 5 inches of precipitation are required to bring the subsoil moisture index close to zero. Timely rains during the planting and growing seasons could produce normal yields and will be especially necessary in those areas of low subsoil moisture. Thus, the market will depend upon growing conditions in the spring and early summer. Favorable weather through the pollination period would result in prices falling seasonally during late July and August, but adverse growing conditions could boost prices sharply.

Corn prices reported for central Illinois have been surprisingly steady at about $2.30 since August. Prices in October slipped to $2.26 from $2.33 in September. In 1988, prices were $2.70 in August and October, then dropped to $2.54 in November. Purchases by the USSR helped offset harvest sales and held prices up. Since then, farmers have held supplies while prices declined and sold corn when prices began to rise, thus creating a steady market.

Generic Certificates

The value of generic certificates issued during September-November 1989 was $459 million, down 62 percent from a year earlier. During September-November, nearly 96 million bushels of corn were exchanged for certificates, against 322 million exchanged last year. Certificates must be held for 5 months before the government will redeem them for cash and sale prices of certificates are below face value.

Certificate cash prices below face value suggest the volume of certificates exceeds immediate needs. Probably much of the corn in desirable locations has already been exchanged for certificates. In addition, plentiful supplies of unencumbered corn have also reduced the need for certificates to free up stocks. On February 20, CCC released a corn catalogue of 66.6 million bushels. This action likely will support certificate values somewhat.

Corn Acreage To Increase In 1990

The 1989 corn program consisted of a 10-percent acreage reduction program, the 0-92 option, and the opportunity to plant some permitted program base, including corn, to soybeans or sunflowers under the 10-25 program. The corn base totaled 82.7 million acres, 80.8 percent of which is enrolled in the program. Program participation resulted in the diversion of 10.1 million acres of corn base to conservation practices (6.3 in ARP, and 3.8 in 0-92).

An additional 3.4 million acres of former corn base were in the long-term Conservation Reserve Program (CRP). Farms participating in the programs planted an estimated 54.8 million acres to corn out of total plantings of 72.3 million. The nonparticipating base amounted to 15.9 million acres, and, assuming this was planted to corn, an additional 1.6 million outside the corn base were also planted to corn.

For the 1990 crop, the corn program includes a 10-percent ARP, the 0-92 option and the 0-25 program. With corn prices this winter well above the loan rate ($1.57 for 1990/91), participation will likely be down somewhat from last year's 80.8 percent. Also, 0-92 signup may be down from last year, especially if a more normal spring occurs in the Corn Belt.

Sorghum

The sorghum supply for 1989/90 is estimated at 1,057 million bushels, down 15 percent from the 1988/89 supply and the smallest since 1983/84. Beginning stocks of 440 million bushels were 34 percent below a year earlier, easily offsetting the 7-percent increase in the 1989 sorghum crop of 618 million bushels. Almost 11.2 million acres of sorghum were harvested for grain in 1989, compared with a little over 9 million acres in 1988, but the average yield of 55.4 bushels per acre was 13 percent below the 1988 yield. For the three major producing States, Kansas, Texas, and Nebraska (76 percent of harvested area in 1989), the weighted yield was down 16 percent from 1988. Half of the sorghum producing States had better yields in 1989 than 1988 but they only represented 7 percent of the area harvested.

Eighty-four percent (369 million bushels) of beginning stocks were tied up in the FOR (28 million) and the CCC inventory (341 million). Thus, at current prices, supply available to the market during the year (excluding FOR certificate redemptions and CCC sales) is reduced to about 688 million bushels, compared with 705 million bushels of uncommitted stocks available in 1988/89. Some of the FOR and CCC stocks will make their way into market channels as a result of generic certificate exchanges and CCC sales, either out-of-condition grain or catalog sales.

Use for 1989/90 is estimated at 790 million bushels, down slightly from 800 million a year earlier . Exports are forecast at 250 million bushels, down 19 percent. Based on export sales reports through February 15, 122.3 million bushels of sorghum had been exported and outstanding sales were 70.3 million bushels. For the comparable period a year earlier, exports amounted to 133.3 million bushels and orders totaled 79.7 million. Japan and Mexico accounted for 86 percent of U.S. exports and outstanding sales so far this year, compared with 54 percent for the same period last year.

FSI use is forecast at 15 million bushels, 7 million under the 1988/89 use. From December 1987 through January 1989 the use of sorghum by the distilling industry ran unusually high, thus elevating FSI use for both 1987/88 and 1988/89 above normal. Since January 1989, sorghum use by the distilling industry has followed a more normal pattern.

Feed and residual disappearance is estimated at 525 million bushels, 57 million above last year. The number of grain consuming animal units (GCAU's) is up about 1 percent but broiler and turkey GCAU's are up 7.1 percent and 8.4 percent, respectively. Sorghum is rated pound-for-pound equivalent to corn in feeding value for poultry, so likely much of the forecast increase in feed disappearance of sorghum this year will be in poultry feeding.

Disappearance of 790 million bushels would leave ending stocks of 267 million bushels, almost 40 percent below a year earlier and the lowest since 1980/81 when carryout stocks were pulled down to 130.3 million bushels. However, the sorghum harvest starts in southern Texas in early July, so that some new-crop sorghum will be available to ease the supply situation in July and August.

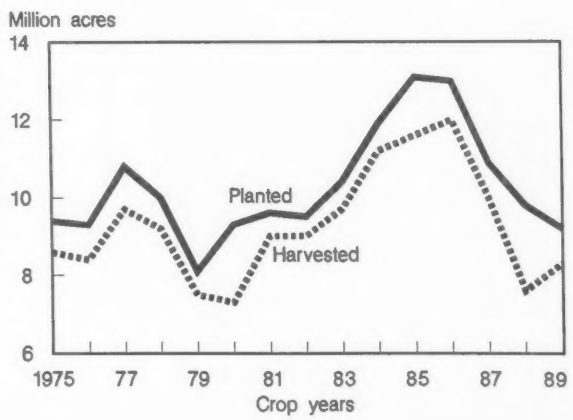
The average price received by farmers for sorghum is expected to fall in the range of $2.00-$2.20 a bushel ($3.57-$3.93 cwt). The price received by farmers in 1988/89 averaged $2.27 a bushel ($4.05 cwt). For the first 5 months of the crop year (September -January), the farm price averaged $2.04 a bushel ($3.65 cwt). The farm price of corn averaged $2.25 a bushel for the same period, thus the price of sorghum has averaged 90.7 percent of the price of corn so far this year, compared with 89.8 percent a year earlier. As sorghum supplies tighten in late winter and spring, sorghum prices may run a little higher relative to corn prices than for the first 5 months.

Barley

The 1989 barley crop is estimated at 403 million bushels, almost 40 percent above the drought-reduced crop of a year earlier. Improved weather conditions helped raise the yield to 48.6 bushels per acre, compared to the drought-stricken level of 38.0 in 1988. Nonetheless, the overall yield is expected to remain almost 4 bushels below the average of the 1980s. The harvested area for 1989 of 8.3 million acres rebounded modestly from 1988, but remained well below other recent years, which averaged 11.2 million acres. Barley harvested acreage peaked at 12 million acres in 1986 (figure 2).

A great deal of the lost area has been in the Northern Plains States, and probably has been placed in the Conservation Reserve Program, as has probably happened with much wheat acreage in the same areas. As of January 1990,

Figure 2
U.S. Barley Area



approximately 2.7 million acres of barley base had been switched to the CRP. In addition, a much smaller area has shifted out of barley and into wheat production as farmers' financial and planting decisions vary from region to region.

Imports for 1989/90 are forecast at 10 million bushels, down slightly from 11 million last year. During the first half of the crop year, barley grain imports amounted to over 5.5 million bushels, about 500,000 more than the same period in 1988/89. Because of greatly diminished beginning stocks (down almost 40 percent this year compared to last), barley supplies are forecast to continue to decline in 1989/90, as in the past 3 years. The decline this year, however, is likely to be relatively small.

Use in 1989/90 is forecast at 455 million bushels, up 30 million from a year earlier, but almost 100 million below 1987/88. Disappearance through the first half of the crop year was 252 million bushels, or about 55 percent of the estimated total. During the first half of the 1988/89 crop year, barley disappearance was 244 million bushels, about 57 percent of the total.

Much of the increase from last year is expected to be in exports, which are forecast up 25 percent (figure 3). For the first half of the trade year, grain exports, at about 1.4 million tons, were only marginally larger than a year earlier. Exports fell 35 percent during the second quarter. Further, most of the remaining sales are likely to be to EEP customers. Outstanding sales and exports stood at over 76.3 million bushels by mid-February.

Food, seed, and industrial uses (at 180 million bushels) are forecast to show no growth during the year. Industrial requirements take up most of this category. Malting barley use has remained relatively constant. Feed and residual uses are forecast to rise to 175 million bushels during the year, due largely to somewhat more attractive prices. Malting barley prices at Minneapolis through the first 8 months of the crop year have averaged $3.30 per bushel, down significantly from $4.08 for the same period during the 1988/89 season. Feed barley prices have fallen as well, although the decline is not nearly as great. From June through January 1989/90, prices at Duluth averaged $2.18 per bushel, compared to $2.25 in 1988/89.

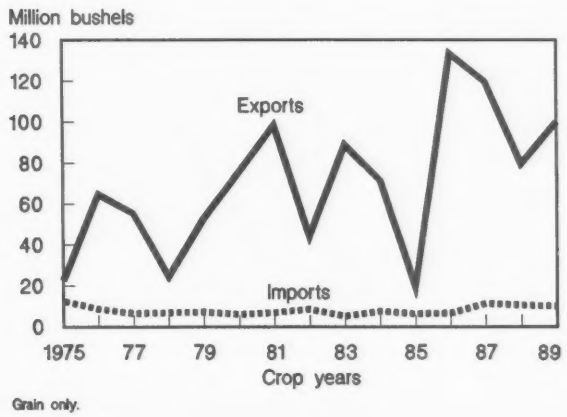
The average price received by farmers for 1989/90 is forecast at $2.40-$2.50 per bushel. Under tighter conditions a year earlier, prices averaged $2.80 per bushel.

Ending stocks in 1989/90 are forecast to drop to 155 million bushels, down 21 percent for the year, which began with 196 million bushels. These would be the lowest stocks since 1981/82, and amount to less than 50 percent of levels in 1986/87 and 1987/88. As total use climbs this year, and stocks fall, the stocks-to-use ratio is expected to drop (figure 4). For 1989/90, the ratio is likely to be only 34 percent, compared to 46 percent last year, and 59 percent the previous year.

As of December 1, barley stocks amounted to 353 million bushels, down about 20 million from a year earlier. Over 36 million were in CCC inventories, with 16.7 million outstanding under loan, over 6 million in the reserve and special producer storage loan (FOR/SPSL), and uncommitted stocks at 294 million bushels.

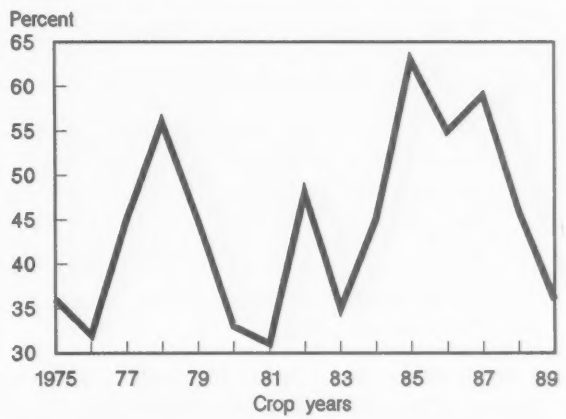
The barley program for 1990 calls for an acreage reduction program (ARP) of 10 percent, identical to the previous year, and half that for the 1988 crop. Further, as last year, there is no paid land diversion (PLD). In 1988 there was an optional 10-percent PLD. For 1990, the target price is set at $2.36

Figure 3
U.S. Barley Trade



Grain only.

Figure 4
U.S. Barley: Stocks-to-Use Ratios



and the loan rate is $1.28 per bushel. A year earlier, the target was $2.43 with a loan of $1.34 per bushel.

In contrast to the PLD, barley producers again this year have the option of participating in a 0-92 program. Those within the program receive a guaranteed deficiency payment rate that will be at least as great as the budget-reduced deficiency payment rate of 24 cents per bushel on program yields. Advance payments will be in cash for the 1990 crops.

Although high barley prices in recent years have not provided a strong incentive for program participation, the program nonetheless continues to be financially attractive to many producers. In 1989, the participation rate fell from 79 to around 68 percent.

Oats

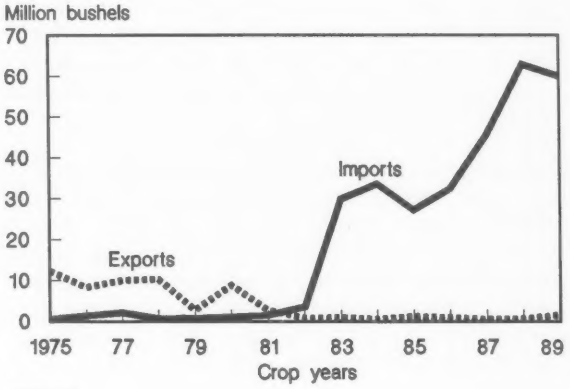
The 1989 oats crop is forecast at 374 million bushels, up almost 75 percent from the drought-ravaged outturn of 1988. Although there was a 1.3-million-acre increase in the harvested area for the 1989 crop (figure 5), a 38-percent rebound in yields (54.4 bushels per acre compared to only 39.3 bushels in 1988) more fully explains the larger crop.

Oats imports are forecast at 60 million bushels in 1989/90, compared with 63 million during the previous 12-month period. From the late 1950s through the early 1980s, U.S. oats imports varied little on an annual basis, and averaged less than 3 million bushels. However, after the 1982 crop year, the United States changed from a net oat exporter to net importer (figure 6). During 1983 through 1985, high corn prices provided an umbrella for net imports. From 1986 through 1988 decreased domestic production encouraged imports. From 1983 through 1988 oat exports averaged about 1 million bushels annually.

For the 1989/90 crop year much of the bulk of the imports likely will come from Canada, but the Scandinavian countries will increase their market share. Authority to market oats has been removed from the Canadian Wheat Board, and with Canada's international sales now in the hands of private industry, shipping of oats to the United States will be facilitated.

Use of oats for 1989/90 is forecast at 411 million bushels, up 40 percent from a year earlier (figure 7). But oats consumption in 1988/89 was extremely low, because of domestic production difficulties. However, use averaged 150 million bushels more during the years from 1975 to 1985. Declines in feed uses are responsible for the decline. In 1989/90, feed and residual uses are forecast at 300 million bushels, up 50 percent from last year, but 17 percent below 1987/88, and more than 30 percent below 1980/81. Relatively high oats

Figure 6
U.S. Oats Trade



Grain only.

Figure 5
U.S. Oats Area

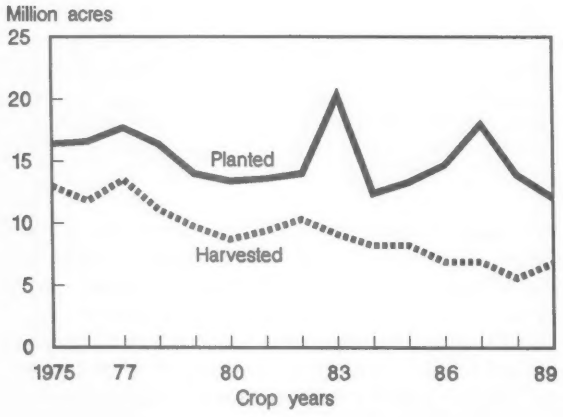
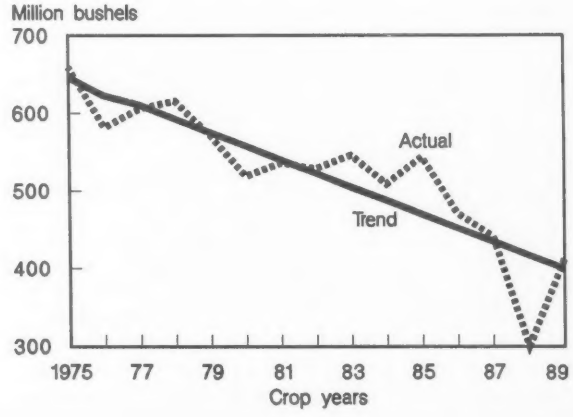


Figure 7
U.S. Oats Consumption



prices have caused many feeders to switch away from oats to other concentrates.

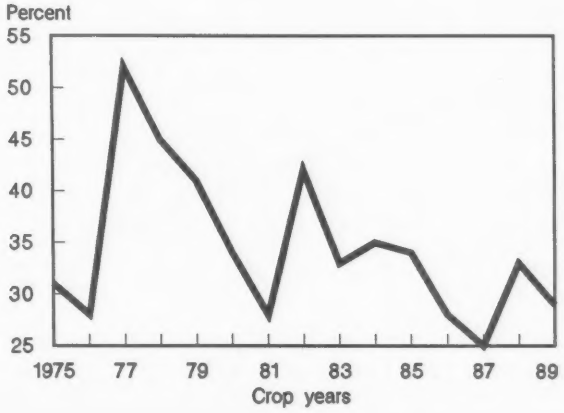
Exports are forecast at 500,000 bushels, down 100,000 from a year earlier, but almost 7 million bushels below the 1975-85 average. U.S. oat exports over the last 15 years have fluctuated greatly, in contrast to imports, which surged only recently. In general, however, exports have trended downward since 1960. By February 15, cumulative exports and outstanding sales totaled under 138,000 bushels, far above the total at the same point last crop year.

Food, seed, and industrial (FSI) uses have historically fluctuated between 70 and 80 million bushels annually. But in 1988/89, the food component surged in response to publication of a study linking oat bran consumption to decreased serum cholesterol levels. This is a claim that continues to be debated today. FSI in 1989/90 is likely to remain high, and is forecast at 110 million bushels.

Ending stocks are likely to increase from 98 million in 1988/89 to 122 million bushels this year. Last year's low stocks were the result of production shortfalls during the year. The 1989/90 estimate is generally in line with a declining trend, and is 25 percent below the 1980-1988 average. The forecast stocks-to-use ratio is only 30 percent in 1989/90 (figure 8).

The average monthly price received by farmers for oats during the first half of the crop year was $1.51 per bushel, compared with $2.60 during the same period in 1988/89. With most of the oat crop marketed during this period, the forecast season average price for the full year typically parallels the 6-month average. For 1989/90, the season-average market price is forecast in the range of $1.45-1.55 per bushel. In 1988/89, the market price averaged $2.61 per bushel.

Figure 8
U.S. Oats: Stocks-to-Use Ratios



As a year ago, the oat program for 1990 again calls for a 5-percent ARP and no paid land diversion. Although similar in basic structure to the other feed grains, the oats program in general and the acreage reduction requirements in particular over the last 2 years have been less restrictive—thereby encouraging plantings. Provisions in the Drought Assistance Act of 1988 continue to allow producers to plant any portion of their farm acreage base to oats without affecting the their base. Although much is uncertain, if supplies continue to ease and uses decline in the upcoming years, oat programs will likely mirror those for other feed grains.

Again in 1990, limited cross-compliance requirements do not apply to oats, thereby encouraging oats plantings, and at the same time allowing a producer to benefit from other commodity programs. However, the 1989 provision that allowed barley and oats bases to be combined in any fashion and at the same time allowing a producer to receive benefits for the planted crop has been discontinued. Oats may be substituted for any portion of the farm acreage base except soybeans. The target price for oats is $1.45 per bushel, and the loan rate is $0.81 for the 1990 crop, down 5 cents and 4 cents respectively.

The 1989 oats program participation rate was 23 percent, down from 30 percent the previous year. Although this is only slightly below the 25-percent average of the 1980s, it is well below the average of 1986 and 1987 when the participation rate was around 40 percent. The financial attractiveness of the oats programs continues to wane. For example, the average farm price is expected to exceed the target price, resulting in no deficiency payments for 1990/91. This may mean that a greater net return above variable cost could be achieved in some other crop, and some farmers may feel their oats base is not worth protecting.

Hay

Hay production for 1989 was revised down 3 percent in January to 145.4 million short tons from the October estimate of 150.5 million. Final crop production estimates for 1982-87 have been released and are included in the appendix table on hay. The area harvested in 1989 turned out to be 652,000 acres more than the October estimate, but the yield was reduced 5 percent to 2.29 tons per acre. In 1989, alfalfa hay and alfalfa mixtures totaled 77.2 million tons, up 11 percent from 1988 when drought reduced yields and production. Other hay totaled 68 million tons, up from nearly 57 million a year earlier.

The reduced crop in 1988 resulted in a much smaller carryin of 17.5 million tons for 1989/90, down from 27.1 million a year earlier. Total roughage supplies in 1989/90 have not been rebuilt to the levels of 1987/88 but are up from 1988/89. Total roughage includes hay and silage, both corn and sorghum. Corn silage production in 1989/90 totaled 86 million tons, up 9 percent from last year. Sorghum silage

Table 3--Roughage supplies and Roughage Consuming Animal Units

	1987/88	1988/89	1989/90
		1,000 tons	
Hay Carryover (May 1)	32,333	27,074	17,507
Production			
Hay Silage	147,457	126,010	145,445
Corn	86,442	78,791	86,243
Sorghum	5,307	5,252	5,304
Supply	271,539	237,127	254,499
		Million units	
Roughage Consuming Animal Units (RCAU's)	76.3	76.3	76.3
		Tons	
Supply per RCAU	3.56	3.11	3.33

production, at 5.3 million tons, was up 1 percent from last year. The total supply of roughage in 1989/90 is up 7 percent from last year but down 6 percent from 2 years ago. The index of roughage consuming animal units (RCAUs) has remained nearly steady at 76.3 million in the last 3 years. In 1989/90 the supply of roughage per RCAU is 3.3 tons, up 7 percent from last year.

On December 1, 1989, hay stocks totaled 101 million tons, up from 90 million last year. While lower than stocks in December 1987 and 1988, they are near the levels of the early 1980's. Use of hay during May-November 1989 was 61.8 million tons, down from 62.8 million a year earlier.

Disappearance for December 1988 through April 1989 was 72.8 million tons and for the comparable period in 1987/88, 90.8 million tons disappeared. Thus, stocks on hand this year are expected to meet needs without pressuring prices. Even if spring is later than usual, hay supplies appear to be adequate to cover needs.

Prices received by farmers for all hay in January 1990 averaged $85 per ton, down from $89.50 last year. Prices of alfalfa hay averaged $93.50 per ton, down from $96.60. In 1989, hay prices increased from January until June. While this increase had some seasonal regularity, it was sharper than usual. In 1990, prices may rise slightly through June but probably not as much as last year.

Food, Seed, and Industrial Use of Corn

Food, seed and industrial (FSI) use of corn for the first quarter of 1989/90 was 300 million bushels, up from 294 million last year. FSI use of corn for all of 1989/90 is expected to be up nearly 5 percent from 1988/89.

The increase in use for 1989/90 is expected to occur in the wet milling sector, up 6 percent to 985 million bushels. The dry corn milling sector probably will use about the same amount as in 1988/89. Use of corn in high fructose corn syrup (HFCS), which accounted for almost 30 percent of FSI use of corn in 1988/89, was down .1 million bushels to 81.7 million in the first quarter of 1989/90 from the year before. The cool, wet summer in many parts of the U.S. reduced soft drink sales and reduced demand for and production of HFCS. While usually above a year earlier, production of HFCS was below a year earlier in July, August, and September.

Strong prices for sugar, especially since September, have likely helped HFCS demand. Sugar prices have weakened since their September highs, partly in response to changes in the sugar import quota, but by late January sugar prices were still above a year earlier. In 1989/90, HFCS may account for 380 million bushels of corn, up 5 percent from 1988/89, especially if normal temperatures and humidity occur next summer to strengthen soft drink sales. Midwest prices at the end of December for HFCS-42 were quoted at 12.46 cents per pound, up from a little over 11 cents last year. The stronger prices are likely in response to higher sugar prices.

Glucose and dextrose production used 49.1 million bushels of corn during September-November 1989, 1 percent more than a year earlier. Corn used in glucose and dextrose production during 1988/89 was up nearly 2 percent from 1987/88. Use is expected to increase nearly 3 percent in 1989/90 from 1988/89. One of the increased uses is in the production of "light" beer because the sugar is completely converted to alcohol and leaves no "extra" calories.

Starch production in September-November 1989 was down 1 percent from the same period a year earlier. Starch demand is usually strengthened by a strong economy, which increases the demand for industrial starch. With the economy expected to show less year-to-year gain, starch production is expected to about equal 1988/89 in 1989/90.

Corn used for dry-milled and alkaline-cooked products has remained fairly steady for several years. Projected use for 1989/90 is 161 million bushels, the same as in 1988/89. Lack of growth in this category is partly due to a steady decline in corn used in beer production. Brewers used an estimated 31.3 million bushels in 1988/89, down 5 percent from the previous year which was also down 5 percent.

Increased cereal, flour, and corn meal production has offset decreased corn use in the brewing industry. Corn used by the distilling industry to make alcohol has been increasing. In 1988/89, an estimated 77 million bushels were reported to the Bureau of Alcohol, Tobacco and Firearms as used by the distilling industry, up 55 percent from a year earlier. Use of sorghum has been down and may have been replaced by corn, partially explaining the sharp increase.

Corn use in ethanol production will be up in 1989/90 because of an export sale to Brazil. Corn used in ethanol production for U.S. consumption is less clear. In 1988/89, sales

Table 4--Corn: Food, seed, and industrial use 1/

Year beginning September 1	Wet-milled products				Dry-milled alcohol	Dry-milled and alkaline cooked products	Seed	Total
	HFCS	Glucose and dextrose	Starch	Alcohol				
	Million bushels							
1975	45	162	116	5	20	154	20	522
1976	62	164	116	10	15	155	20	542
1977	80	170	124	10	20	158	20	582
1978	105	170	124	15	20	155	20	609
1979	127	170	120	25	20	158	20	640
1980	165	183	120	35	35	160	20	718
1981	185	183	130	83	35	162	19	797
1982	215	188	127	130	50	170	15	895
1983	256	189	147	150	50	164	19	975
1984	310	187	143	170	100	160	21	1,091
1985	328	188	152	185	127	161	19	1,160
1986	339	185	155	200	135	161	16	1,191
1987	359	187	167	200	136	163	17	1,229
1988	362	190	164	210	139	161	19	1,245
1989	380	195	165	245	140	161	19	1,305

1/ Data are estimates based on production and sales figures from Government and private industry.

of alcohol- blended gasoline were down 6 percent from the year earlier. However, more corn was used to produce the alcohol as alcohol plants that used sorghum and molasses as feed stock closed. The strengthening in gasoline prices makes alcohol blending more attractive. Thus, blended sales may level off and with export sales, corn use in 1989/90 for wet milled alcohol is expected to be up 17 percent from last year.

Feed Demand

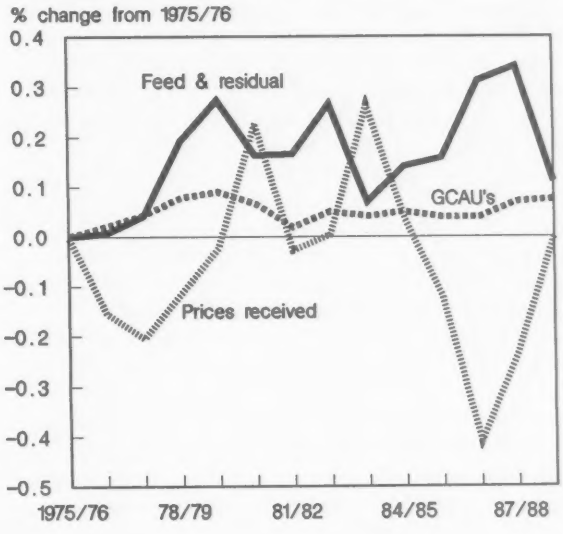
The estimated 1989/90 feed and residual use of feed grains (corn, sorghum, barley and oats) is up 12 percent from the 119 million metric tons used in 1988/89 due mainly to lower prices. The index of grain consuming animal units (GCAU's) for 1989/90 is up nearly 1 million units, as larger numbers of cattle on feed, and poultry offset declines in numbers of dairy cattle and hogs.

Feed demand by the dairy sector should remain strong. In the 21 States for which milk production is reported monthly, the number of cows declined nearly 1 percent, but milk production in January was nearly the same as last year. Concentrates fed per cow on January 1, 1990, were 17.9 pounds, up nearly 5 percent from January 1, 1989. Milk prices have been up from last year and reported value for concentrates was $8.02 per 100 pounds, down nearly 5 percent. The alfalfa hay price received by farmers in January was $93.50 per ton, down from $96.60 last year. Thus, producers have an incentive to increase feed use to boost milk production per cow.

The cattle feeding industry is expected to use more feed because of larger numbers of cattle on feed and also because cattle were put on feed at lighter weights late last fall. The drought last fall in many winter wheat grazing areas caused

Figure 9

GCAU's, Corn Prices, and Feed and Residual Use of Corn



reduced grazing and early movement of cattle to the feedlots. These cattle will likely require a longer time on feed to reach market weight. Numbers of feeder cattle outside feedlots on January 1, 1990, were estimated down 1 percent. However, yearling supplies were up 6 percent. Placements are expected to remain strong through the entire feed year.

Feed demand by the hog sector is expected to be down in 1989/90. The pig crop in December 1988-May 1989 was even with a year earlier because increased numbers of pigs per litter offset a decline in the number of sows. In June-November 1989, the pig crop was down 2 percent from 1988, even with an increase in pigs per litter. Producers' far-

rowing intentions reported for December 1989-May 1990 suggest another decline from the year earlier.

The poultry sector's feed use in 1989/90 is expected to rise. Spurred by positive returns in 1989, broiler producers are expected to increase production 8 percent from a year earlier. Turkey producers, in spite of negative returns in the first and third quarters, are expected to continue placing more turkeys, and output in October 1989-September 1990 may be up 9 percent from a year earlier. Numbers of laying hens will likely be up in 1989/90 from last year.

Transportation Outlook

Exports Strain Distribution System

A tight rail car situation developed in November 1989 and has continued through February. Although the pace of exports will likely slacken, the demand for transportation of grain and soybeans is expected to remain relatively high for the remainder of the 1989/90 crop year. As the weather warms, permitting reopening of the Great Lakes ports and the Upper Mississippi River, the rail car situation is expected to improve. Current high demand conditions are based on increased exports of grains and soybeans, now projected to be more than 2 to 3 percent above 1988/89. Grain and soybean exports during September-December 1989 averaged nearly 11 percent above a year earlier.

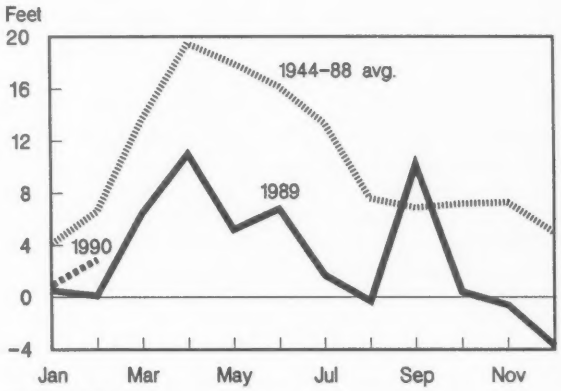
Table 5 shows the increase in grain volume, especially corn, at the four coastal regions. From September 1989 through January 1990, average rail car loadings of grain rose 34 percent to 32,691 cars per week. Barge grain shipments, however, declined 27 percent in the same period to 2.2 million tons. Weather conditions in January limited barge shipments, which were a near record for the month. January is normally the low month for barge shipments as the Upper Mississippi locks are usually closed by ice, and low water conditions normally prevail below St. Louis. The near record volume shipped by barge in January 1990 reflects weather limited capacity.

Squeeze Came in November

The crunch began in November 1989 when grain and soybean exports (as measured by inspections for export) rose 29 percent from the prior month to 471 million bushels. Corn inspections for export in October were 64 percent above a month earlier and showed another month-to-month gain of 73 percent in November. Those at Atlantic ports showed the largest percentage gains—October was 7.5 times larger than September and November corn inspections were 23 times as large as October. Volume gains were much larger at Gulf ports—up 43.3 million bushels and 53.6 from a month earlier in these 2 months.

The squeeze on rail and barge facilities stems from a combination of factors. The Mississippi River, which had been plagued with low water levels since June 1988, fell further in November 1989 when the flood gauge at St. Louis averaged nearly 3 feet below a year earlier and 8 feet below the 1944-88 average. Low water slowed movement, and draft restric-

Figure 10
River Stages at St. Louis

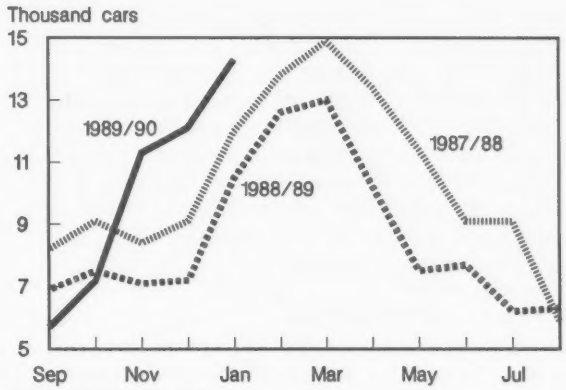


Measured at flood gauge.

Table 5-Grains inspected for export, by port regions, selected months, 1989

Regions	September		October		November		December	
	Corn	All grains and soybeans	Corn	All grains and soybeans	Corn	All grains and soybeans	Corn	All grains and soybeans
	--Million bushels--							
Great Lake	1.5	18.7	3.9	21.7	32.0	42.0	3.2	13.2
Atlantic	0.1	12.4	0.9	19.7	22.8	35.2	17.4	28.5
U.S. Gulf	86.4	187.9	129.7	242.5	183.3	280.5	158.4	250.4
Pacific	15.1	62.2	32.3	68.5	55.4	105.9	66.6	123.2
Interior	2.4	9.8	6.1	13.9	6.2	7.6	0.9	4.0
Total	105.6	291.0	173.0	366.3	299.6	471.3	246.0	427.3

Figure 11
Rail: Weekly Average Grain Unloadings



Atlantic, Gulf, and Pacific ports.

tions reduced carrying capacity. As the loadout capacity of the Gulf ports became strained, shippers diverted grain traffic to North Atlantic, Great Lakes, and Pacific Coast ports.

The Atlantic and Pacific ports receive a majority of their export corn by rail. Rail deliveries of grain to those ports rose 135 and 19 percent, respectively from September to October 1989. In November rail deliveries rose 55 and 24 percent respectively from October. Rail volume in November also increased 129 percent at U.S. Gulf ports where corn exports had grown 41 percent from October. While total demand for rail cars remained below historical peaks, the lengthy trips required to Pacific and Gulf coast ports severely strained rail capacity.

Under normal circumstances, the majority of corn exports would be carried by barge to the Louisiana and Alabama ports. As expected, barge shipments in November rose 20 percent from October to 4.7 million tons, despite low water conditions.

Grain shipments by rail also rose in November to 31,720 carloads per week, up almost 10 percent from the prior month. Much of the increase resulted from increased demand for rail delivery of grain to ports. In November 1989, average rail car unloadings at Atlantic, Gulf and Pacific ports (data are not available for Great Lakes ports) rose 57 percent from the prior month to 11,290 cars per week and accounted for more than 35 percent of all grain rail loadings.

Cold Weather Adds to Problems in December

Weather slowed grain shipments during December 1989. A prolonged cold spell in the last half of December caused diesel fuel to solidify, rail brake lines to freeze, and the work pace to slow. These factors reduced average weekly rail shipments to 29,420 cars per week in December, 7 percent below October 1989.

Cold weather had still greater impacts on the Mississippi River. As the river froze and ice jams developed, already low water levels fell further. Many barges were trapped by ice and the Coast Guard restricted barge drafts to 6.5 feet, compared to the normal 9.0 feet, effectively closing the river between St. Louis and Cairo, Ill. As a result, the volume of grain shipped on the Illinois and Mississippi Rivers in December fell 47 percent from November to 2.5 million tons.

The change affecting rail car availability the most occurred at Pacific Coast ports where corn inspections for export rose 341 percent from September through December 1989, totaling 66.6 million bushels in that month. Essentially all corn shipped through these ports arrives by rail. At these ports 5,400 grain cars, on average, were unloaded each week in December 1989, up 62 percent from September. At the Mississippi River ports, where relatively few grain receipts usually come by rail, rail grain deliveries rose 350 percent averaging 1,387 cars per week in December. Rail unloadings at Texas ports, which also require lengthy trips, increased 104 percent over the same months to 2,768 cars per week.

Despite the weather related impediments, grain and soybean inspections for export during December fell only 9 percent from the prior month to 427.3 million bushels. Corn accounted for 58 percent of the total. In December, rail shipments to ports rose 7 percent from November to 12,098 cars per week. In that month, more than 41 percent of all grain car loadings were destined for export ports.

Pacific Coast ports accounted for nearly 45 percent of grain railed to export ports. South Atlantic and Gulf ports were second, accounting for 39 percent. Corn exports through Pacific coast ports in December rose 20 percent above November, accounting for 54 percent of grain exports through these ports. The lengthy hauls involved require more car days than similar shipments to Atlantic or Gulf coast ports.

As a result, rail cars for grain shipments came into short supply last fall, and remain in short supply. Between October 1989 and January 1990, the number of jumbo covered hopper cars (100 tons or more capacity) increased about 1 percent to 244,000, as 2,700 privately owned cars came into service. The increase, however, was not sufficient to offset the heavy demand.

The diversions of corn to rail substantially increased transportation costs to the grain marketing industry as per ton rail rates are normally well above comparable barge charges.

Impact on Rates

Railroads do not appear to have increased their rates dramatically. The Bureau of Labor Statistics' Rail Rate Index for Grain did not increase in October 1989, rose only 0.2 percent

in November, and held level through December. Between September 1989 and January 1990, the index indicates an increase of less than 1 percent. It must be remembered that much of the export grain shipped by rail moves under contract rates, which can only be adjusted at predetermined points. Thus, shippers using such rates are at least partially shielded from the usual impacts of rising demand.

One market for freight cars in which rates could have been expected to rise is the Burlington Northern's Certificates of Transportation (COTs). Here both single cars and unit trains are offered for future delivery to shippers. BN quotes offer prices and accepts bids, in descending order, until the tender is filled. COT offer prices for westbound corn in 54-car units fluctuated in a narrow band around $2,500 per car from October 1989 through January 1990. Bids by shippers averaged up about 6 percent during October-December 1989, but fell about 3 percent from December by the end of January.

Barge rates rose sharply in October. Rates from Peoria, Ill., to New Orleans averaged $10.49 per ton, up 78 percent from the prior month. By December rates from Peoria had climbed to $12.15 per ton, nearly 70 percent above the 1988/89 average.

Rail Outlook

With improving weather, rail loadings of grain in January 1990 rose 12 percent to 32,691 cars per week, still below the January 1981 record of 34,396 cars per week. Preliminary data for January 1990 indicate that rail deliveries to ports rose 19 percent from the prior month, accounting for 44 percent of total rail grain loadings. Growth was most pronounced at Mississippi River and North Atlantic ports which rose 51 and 38 percent, respectively, from the prior month. Lesser increases were also experienced at the South Atlantic, Texas, and Pacific Coast port regions. As a result, the tight supply situation for jumbo grain cars continued through January.

How long will rail car availability remain tight? A number of factors bear on the answer. It appears unlikely that the grain car inventory will increase significantly in the next 2 months. BN, the largest rail carrier of grain, has announced plans to buy about 1,000 new jumbo hopper cars. These, however, will not be available for use before the fall harvest. The Soo Line Railroad has announced that it will lease as many as 500 covered hopper cars from the Canadian Pacific Railroad, but these may serve only to replace already leased Canadian cars which must be returned. It appears that the jumbo hopper car inventory is unlikely to grow in the next few months.

As spring planting approaches, rail shipments of fertilizer materials can be expected to increase. Already, unseasonably warm weather in January and February has caused these shipments to begin. Following unloading, cars used for dry fertilizers can be cleaned and carry grain as a back haul. The time required for cleaning, however, increases turnaround time and reduces car availability.

There is some evidence that the pace of corn exports, a root source of the current high demand for rail cars, is about to slacken. Through December 1989, about 37 percent of the 57.8 million metric tons of projected 1989/90 corn exports had been shipped. Thus, in the first one-third of the year, slightly more than a third of projected corn exports had been realized. Given the high volume of rail shipments to ports (14,337 cars per week) and near record barge shipments during January, an additional 7 million metric tons of corn may have been shipped in that month. Therefore, nearly one-half of the forecasted corn exports may have been accomplished in the first 5 months of the crop year.

Figure 12
Weekly Average Rail Car Loadings of Grain and Soybeans

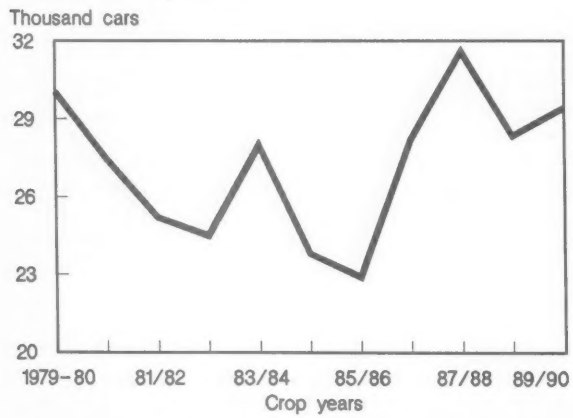
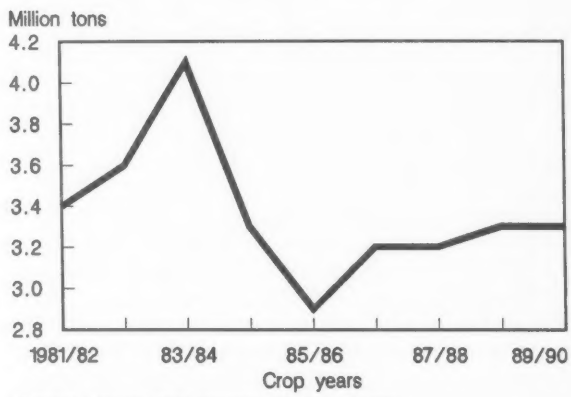


Figure 13
Average Monthly Grain Shipments



Mississippi River and Illinois Waterway. 1989/90 preliminary.

Figure 14
Rail Rate Index for Grain

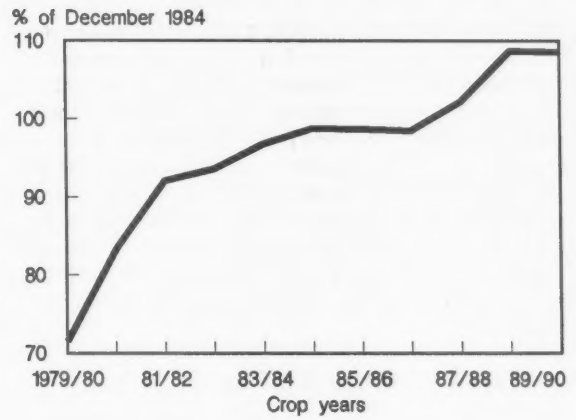
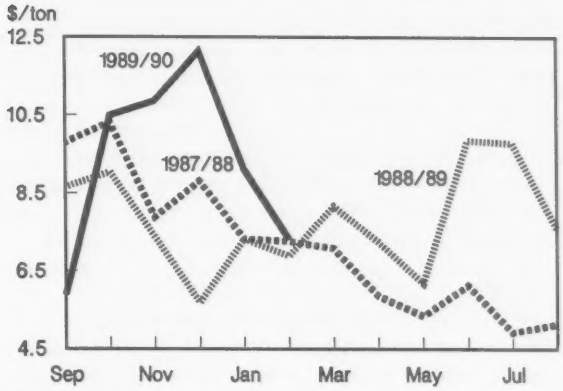


Figure 15
Barge Rates to New Orleans



From Peoria, Ill.

Renewed and increased availability of water transportation is the final major factor. Great Lakes ports have been closed during January and February this year and, historically, do not reopen until April. During the first 4 months of the 1989/90 crop year, nearly 24 million bushels of grain and soybeans were inspected for export through these ports. Located on the edge of major corn, wheat and soybean growing areas, their reopening could provide another outlet to export markets. The relatively short hauls from adjacent storage centers to these ports reduces the number of car days required in comparison to shipments to Gulf ports.

Barge Outlook

Historically the Mississippi River begins rising in February and peaks in April. Although record low water levels were experienced in December 1989, the water has commenced to rise and near normal navigation conditions appear likely in the spring.

In January 1990, as measured at the St. Louis flood gauge, the Mississippi River averaged nearly 5 feet below the 1944-88 average and nearly 1 foot below a year earlier. At mid-February, the river at St. Louis showed a 4-foot rise above the January 1990 average, and nearly 7 feet above December 1989. As the spring thaw melts ice and the Upper Mississippi locks return to service, more normal grain shipments, 3-4 million tons per month, are anticipated.

Opening of the new lock and dam complex located slightly south of Alton, Ill., promises to offer more than double the capacity of the old Lock and dam 26 complex. In the past, a bottleneck often formed at the half-century old facility. One day last November, 95 tow boats and more than 1,000 barges were stacked above and below the structure. Delays of 1 to 2 days were common and in October-November 1989 there were delays of 5 or more days.

The new main lock, now in operation, is 1,200 feet long, double the length of the old. Where the old structure could handle only 9 barges at a time, the new main lock can accommodate 15 barge cuts. Time required to "lock through" will also be reduced from 60-90 minutes to about 30 minutes. As a result, the new main lock is expected to be able to handle 600 barges per day, up from 250 for the old structure. Later a 600-foot auxiliary lock will be opened to replace the existing 366-foot auxiliary lock.

Despite an increase in the inland waterway fuel tax to 11 cents per gallon on January 1, 1990, barge rates for grain in January averaged sharply down from December 1989. Rates from Peoria, Ill. to New Orleans, for example, fell 20 percent to $9.72 per ton. As navigation conditions improve, barge rates are expected to slip further. The anticipated continuation of substantial corn exports, however, suggests that rates will remain above 1988/89 averages.

World Coarse Grain Outlook

World trade in coarse grains is projected to rise 6 percent in 1989/90, the second straight significant increase. [1/] The increase stems from continued large Soviet imports and gains in imports by a number of other countries. The growth contrasts with the depressed period between 1985/86 and 1987/88. The United States is expected to pick up most of the growth in world trade in 1989/90 as foreign exports are only expected to rise slightly.

[1/] All trade years referred to in this section are October-September and exclude intra-EC trade unless otherwise specified.

World production is forecast at 800 million tons, up 10 percent from 1988/89. World consumption is forecast to increase about 4 percent to a record 825 million tons, leading to a stock reduction of 25 million tons. This would place the stocks-to-use ratio at 14.6 percent, based on projected ending stocks of 120 million tons, the lowest since 1983/84.

The United States accounts for most of the increase in world production and more than half of the forecast rise in use. Foreign coarse grain production is forecast to be unchanged from 1988/89 at 579 million tons. Foreign consumption is forecast up 2 percent to 652 million tons, reflecting higher imports and some drawdown in stocks.

Largest Production Changes in Europe and the Soviet Union

The forecast of stable total foreign production is based on a 1.5-percent increase in yields which offset a reduction in area harvested. Average foreign yields are projected at 2.01 tons per hectare, just above the 1987/88 record, and consistent with trend growth over the last 20 years. Area harvested by foreign producers has generally been declining since peaking in 1981/82.

The single largest change for a country or region is likely in the Soviet Union, whose coarse grain crop is forecast up 9.5 million tons. The Soviet have reported their total grain crop at 211.1 million tons, with record average yields. This total is up 8 percent and represents the second largest crop of the 1980's. Calculated grain area was down 3 million hectares to the lowest since at least 1955. (Individual grain area and production figures have not yet been reported by the Soviets.)

Another large production gain is taking place in Eastern Europe, whose coarse grain harvest is forecast up 6.2 million tons from the generally poor crops of 1988/89. Increases are forecast for all East European countries, and it appears that the gains can be attributed mainly to better growing conditions rather than any policy shifts, higher input use, or other causes. (See section on Eastern Europe.)

The largest production decline in 1989/90 is a 7.4-million-ton drop forecast for the European Community (EC). This resulted from lower plantings in nearly all member countries, largely due to shifts of barley area to wheat, and dry conditions which depressed yields in France and Spain, the EC's two largest coarse grain producers.

Other significant decreases are taking place in Sub-Saharan Africa, down a forecast 4.4 million tons from 1988/89, and in the Middle East, down 3.8 million. However, in both cases, the declines follow record crops. Drought and heat in Syria, Turkey, and Iraq account for virtually all of the 22-percent Middle East decline. For Sub-Saharan Africa, even with the forecast 10-percent decline, production will be the second highest on record. The largest African decline is in Sudan, followed by smaller reductions in Niger, Ethiopia, and some others in West African countries. Although growing conditions in most of Ethiopia were favorable, a severe food crisis has developed because of grain shortfalls in northern areas related to drought and warfare.

Import Growth Continuing in 1989/90

World trade in coarse grains is projected at 100 million tons in 1989/90, the highest since 1984/85 and the third highest on record. Coarse grain trade is also expected to exceed wheat trade for the first time in 8 years. In each year during 1975/76 to 1980/81, more coarse grains were imported than wheat.

The large boost in coarse grain trade in 1988/89 was virtually all due to the Soviet Union. While some countries showed year-to-year increases and others declines, aggregate foreign imports, excluding the USSR, dropped more than 1.5 million tons in 1988/89. Although Soviet imports are expected to increase again, most of the projected gain for 1989/90 will originate from other countries. The largest increase is expected in Eastern Europe, where imports are forecast up 1.3 million tons. This rise partly stems from sizable food aid donations from the EC and the United States. Another part of the East European increase is attributed to Yugoslavia, where, despite a marked improvement in corn production, supplies are tight because farmers are apparently holding their crops as a hedge against galloping inflation.

A dramatic jump will also occur in Turkey where a drought-induced grain shortage is forecast to raise imports from just over 300,000 tons in 1988/89 to nearly 1.6 million this year. Smaller but significant import gains are also forecast for Korea, Mexico, China, Iraq, and Algeria. For the most part, higher feed demand is driving these increases. The situation is less clear for China, since some of China's corn imports are reported to have been used to fulfill export contract obligations to Japan.

In the Soviet Union, overall feed grain supplies are forecast to be high because of the good harvest and high expected imports. Nevertheless, there have been some recent reports of localized feed shortages, probably reflecting marketing and distribution problems. Despite the larger crop, State procurements of coarse grains are down, possibly by as much as 2 million tons. This is reducing State production of mixed feeds, leading to shortages for farms dependent on mixed feeds from the State. Conversely, feed supplies are likely up in areas where more grain is being kept on farm. Procurement of coarse grain as a share of Soviet production is expected to be the lowest in many years.

For the first time since 1982, the Soviets have been importing poultry meat from the United States, an indication that meat availability remains a serious problem. Unless more

Table 6--World coarse grain trade: Major exporters and importers by commodity, 1985/86-1989/90 1/

Item	1985/86	1986/87	1987/88	1988/89 2/	1989/90 3/
	Million metric tons				
CORN					
Exporters:					
U.S.	31.5	39.4	44.5	51.3	58.0
Argentina	7.4	4.0	3.7	2.5	2.5
China	6.4	3.8	4.1	3.7	2.5
Thailand	3.8	2.6	0.8	1.4	0.9
South Africa	1.5	2.6	0.8	2.0	3.2
Others	3.9	4.1	3.3	3.4	3.9
Total	54.5	56.4	57.2	64.3	70.9
Importers:					
Japan	14.6	16.1	16.7	15.9	16.1
USSR	10.3	7.6	8.1	17.9	18.5
EC-12	4.8	2.9	3.7	2.4	2.5
Korea, Rep.	3.6	4.6	5.0	5.7	6.7
Taiwan	3.1	3.5	4.4	4.2	4.3
Mexico	1.7	3.4	3.2	3.2	4.0
China	0.4	1.6	0.2	0.0	0.5
East Europe	2.2	1.7	2.2	2.4	3.5
Brazil	1.9	1.4	0.0	0.2	0.1
Egypt	1.9	2.4	1.4	1.2	1.4
Others	10.0	11.2	12.3	11.2	13.3
Total	54.5	56.4	57.2	64.3	70.9
SORGHUM					
Exporters:					
U.S.	4.1	5.1	6.1	8.1	6.5
Argentina	2.2	1.0	1.2	0.7	0.9
Australia	1.1	0.6	0.6	0.3	0.4
Others	1.1	1.2	0.4	1.6	1.1
Total	8.5	7.8	8.3	10.8	8.4
Importers:					
Japan	5.1	4.2	3.9	4.1	3.6
Mexico	0.6	0.8	0.9	2.3	2.0
Taiwan	0.8	0.8	0.3	0.1	0.2
Venezuela	0.8	0.8	1.7	1.0	0.7
Israel	0.5	0.2	0.4	0.4	0.4
USSR	0.1	0.1	0.0	1.2	0.3
Others	0.6	0.9	1.1	1.7	1.2
Total	8.5	7.8	8.3	10.8	8.4
BARLEY					
Exporters:					
EC-12	7.3	6.2	7.0	9.0	9.5
Canada	4.8	6.0	3.5	3.4	4.0
Australia	3.7	2.2	1.6	1.4	1.7
U.S.	0.8	3.0	2.9	1.7	2.0
Others	1.9	1.2	1.0	1.3	1.0
Total	18.4	18.5	16.1	16.9	18.2
Importers:					
Saudi Arabia	6.6	9.0	4.8	4.6	4.6
USSR	2.9	3.0	2.3	3.2	3.9
East Europe	3.3	1.3	1.6	2.1	2.0
Japan	1.5	1.2	1.3	1.3	1.2
Others	4.0	4.1	6.1	5.7	6.5
Total	18.4	18.5	16.1	16.9	18.2
COARSE GRAINS					
TOTAL TRADE	83.5	84.1	83.7	94.1	100.0

1/ October-September year, excludes intra-EC trade. Totals may not add because of rounding. 2/ Preliminary. 3/ Forecast.

meat is purchased from other sources, shortages could be exacerbated if East European meat exports to the Soviet Union are redirected to western markets or to domestic consumers.

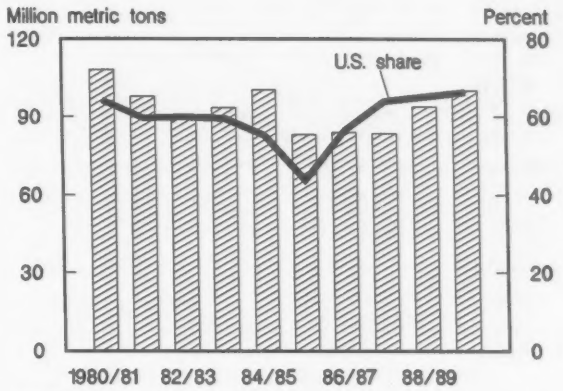
U.S. Market Share To Rise Again

The U.S. share of the world coarse grain market is forecast at 66.5 percent in 1989/90 (fig. 16). This would be the fourth consecutive increase from the recent low of 44 percent of 1985/86 and the second highest share of the last three decades.

U.S. exports are forecast at 66.5 million tons, up 8 percent from 1988/89 and the highest since 1979/80. Higher corn

Figure 16

World Coarse Grain Trade and U.S. Share



1989/90 forecast. Excludes intra-EC trade.

exports account for most of the increase. The pace of exports to date is well above last year's pace. Monthly shipments were a record 7.5 million tons in November 1989, well above the previous high of 6.2 million in November 1980. Shipments in December of nearly 6.6 million tons also exceeded the earlier record. Exports to the Soviet Union accounted for the greatest share of these monthly totals, with 3.4 million tons shipped in November and 3 million in December.

The Soviet Union is expected to repeat as the single largest U.S. corn buyer in 1989/90, ahead of Japan. Through February 15, the United States had shipped 9.8 million tons of the approximately 11 million tons purchased to date. Further purchases may have been delayed by reported Soviet port congestion. Apparent internal transportation and handling problems have limited the movement of grain out of Soviet ports.

Static Outlook for Competitor Exports

Foreign coarse grain exports are forecast to rise only 2 percent in 1989/90. Competitor corn shipments are projected at about the same level as 1988/89, with sorghum down 27 percent, and barley up 7 percent. The major competing barley exporters have completed their harvests, but the corn and sorghum outlook still depends on the outturn in South Africa and Argentina, where crops are just maturing.

South Africa's corn crop is forecast to drop 36 percent from the bumper crop of 1988/89, but carryover from that crop will permit an increase in 1989/90 (October/September) exports. Corn exports in 1989/90 are forecast up 60 percent to 3.2 million tons, asssuming erratic weather does not seriously reduce the new crop. Production is forecast at 7.5 million tons, compared with an average of 8.4 million for the previous 10 years. Area planted in South Africa has report-

edly dropped, continuing a recent trend, and yields are also expected to decline to near average levels.

Argentina's corn exports are forecast at 2.5 million tons, equal to 1988/89, and sorghum up nearly 30 percent to 900,000 tons. Yields should improve markedly from last year's drought-reduced levels. Despite problems with heat and dryness in some areas, growing conditions in the major producing regions have been good. While better profitability from oilseeds has kept coarse grain plantings down, less drought-related abandonment will mean larger harvested area.

The pace of China's corn and sorghum exports in the first few months of 1989/90 has been well below a year earlier, suggesting that exports for the year will fall. Corn exports are forecast to drop by a third to 2.5 million tons, the lowest in 6 years. After surging dramatically in 1988/89, China's sorghum exports are also expected to fall.

China's export prospects are difficult to gauge. Estimated coarse grain output is down 3 percent this year and China's corn prices apparently have become less competitive on world markets due to inflation. However, surplus supplies reportedly still exist in the major producing areas in the north, and it is not clear if domestic feed demand—concentrated in the south of the country—has risen significantly, given slow income growth and austerity programs.

Australia's coarse grain production is forecast to rise 8 percent mainly because of a larger barley crop. Record barley yields have been achieved and area is up slightly. Since a large proportion of the crop is of malting quality, Australia should readily find export markets for its crop. However, due to a sharp drop in barley area since its peak in the mid-1980's, production is only about average. The area decline largely reflects better relative prices for other enterprises, particularly sheep.

In contrast to most other foreign suppliers—whose recent exports have fallen below levels earlier in the decade—the EC is expected to have record coarse grain exports for the third straight year. Since 1987/88, the EC has ranked second to the United States. In 1989/90, propelled by further increases in barley, EC exports are forecast up 9 percent to 11.8 million tons. The EC dominates the world barley market; its market share is forecast at 52 percent this year based on shipments of 9.5 million tons. Most of the balance of EC exports consist of corn.

Eastern Europe Coarse Grains: Background and Outlook

Peter A. Riley*

Abstract: Eastern Europe's coarse grain production followed no clear trend during the 1980's, while feed use has been relatively flat. Imports have declined from peak levels a decade ago, reflecting financial constraints. Despite problems with feed supplies, meat exports have been important. Coarse grain imports for the next several years will depend heavily on foreign assistance.

Keywords: Eastern Europe, coarse grains, production, imports, exports, feed, meat, livestock.

Eastern Europe's coarse grain output in 1989/90 is estimated at 65.8 million tons, up 10 percent from the previous year. Despite this improvement, the region's coarse grain imports also will rise to a forecast 6.2 million tons, the highest since 1980/81, and allow a substantial increase in consumption. Eastern Europe's exports are likely to match last year's total of just 700,000 tons, the lowest in at least 30 years.

Part of the increase in imports is linked to the dramatic political and economic changes of recent months: large amounts of grains and other commodities are being donated or sold under concessional terms to support the region's reform efforts. Any surge in Eastern Europe's imports may be short-lived, however. Commercial import capacity for the region will probably remain severely constrained for some time by large debts and foreign exchange shortfalls, and the region is unlikely to be able to resume large coarse grain imports on the scale of the late 1970's without large flows of concessional grain or financial assistance.

Coarse Grain Production

For Eastern Europe as a whole, corn is the most important coarse grain produced, followed by barley, rye, oats, and mixed grain. (see table A-1). Wheat is the region's single largest grain crop. While wheat and barley are important in all of the countries, virtually no corn is grown in Poland and East Germany because of unsuitable growing conditions. Corn is the leading grain crop in Hungary, Romania, and Yugoslavia; Bulgaria and Czechoslovakia also produce substantial quantities. [1/]

Production of grains and other field crops in the region is dominated by state and collective farms, with the private sector producing significant amounts of grain, mainly in Poland and Yugoslavia. The degree of mechanization is generally highest on state farms. Most private plots are used for more labor intensive operations such as fruits and vegetables.

After relatively steady growth in the 1960's and 1970's, coarse grain production followed no clear trend during the 1980's. Harvests in 1986/87 reached a record 73 million tons, but output of just under 60 million tons in 1988/89 was the lowest in more than a decade. Most of the volatility in recent years has been due to large swings in corn output caused by weather-damaged crops in the Balkans. In 4 of the last 5 years, Eastern Europe's average corn yields have fallen below the 30-year trend.

Coarse grain area has been declining for most of the last 3 decades, with production increases resulting from improved yields. Despite numerous problems, Eastern Europe's average yields are not that far behind the average in Western Europe. Over the last 5 years, East European yields have been close to 85 percent of Western Europe's and about 60 percent of U.S. yields. However, while they increased at a similar rate to Western Europe for much of the 1960's and 1970's, growing by more than 3 percent per year, Eastern Europe's average growth has fallen behind since, slowing to about 1 percent in the 1980's (fig. A-1).

In contrast, wheat production in the region has trended upward during the 1980's, reflecting gains in both area and yields. Most of the growth occurred in Poland and other northern countries, largely reflecting better relative procurement prices for wheat.

Feed Grain Use

About 80 percent of coarse grain disappearance is estimated to be for feed use. Feed use in the 1980's has been relatively flat after strong growth in the previous two decades. Total grain used for feeding has continued to increase, however, because of a sharp increase in wheat feeding in recent years. During the 1980's, dependence on imported feed grains diminished because of reduced import ability, the drive for greater grain self-sufficiency, and some reductions in livestock production.

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1/ USDA has not used official production data from Romania in recent years because of doubts about their accuracy. Current USDA production estimates were adjusted down this month and may be revised again if more information becomes available.

Table A-1--Eastern Europe Coarse Grains: Production, Consumption, Imports, and Exports

Year	Bulgaria	Czecho-slovakia	East Germany	Hungary	Poland	Romania	Yugoslavia	Total East Europe 1/
				1000 MT				
PRODUCTION								
1976/77-80/81	4275	5110	6040	7363	14407	13231	10250	60991
1981/82-85/86	3929	5495	6973	8156	16963	14626	11620	68177
1986/87	4078	5479	7460	8416	17534	16180	13569	73147
1987/88	3025	5607	7203	8313	17101	11470	9671	62821
1988/89	3017	5240	6210	7574	16930	11450	8646	59542
1989/90 2/	3526	5530	6760	8330	18300	12617	10227	65765
CONSUMPTION								
1976/77-80/81	4767	6028	8464	7409	18491	13725	10232	69428
1981/82-85/86	4696	6005	8433	7739	17660	14118	10928	69995
1986/87	4278	5705	9103	7868	18073	15545	10986	71989
1987/88	4021	5920	8657	7979	17920	12370	10775	68073
1988/89	4417	5590	8383	8344	17868	11350	9910	66337
1989/90 2/	4626	5880	8725	8495	19070	13317	10389	70977
IMPORTS								
1976/77-80/81	537	847	2682	231	4175	1176	231	9881
1981/82-85/86	704	560	2143	102	789	493	88	4880
1986/87	600	250	1251	179	529	321	133	3263
1987/88	890	120	1666	285	589	30	425	4005
1988/89	1336	250	2105	180	960	0	75	4906
1989/90 2/	1100	200	2300	100	1050	850	600	6200
EXPORTS								
1976/77-80/81	131	23	280	221	17	720	250	1647
1981/82-85/86	68	61	269	213	221	909	893	2635
1986/87	0	100	216	140	50	600	1570	2676
1987/88	0	50	260	390	36	130	113	979
1988/89	0	50	240	50	200	150	0	690
1989/90 2/	0	50	250	200	50	0	150	700

1/ Also includes Albania.
2/ Forecast.

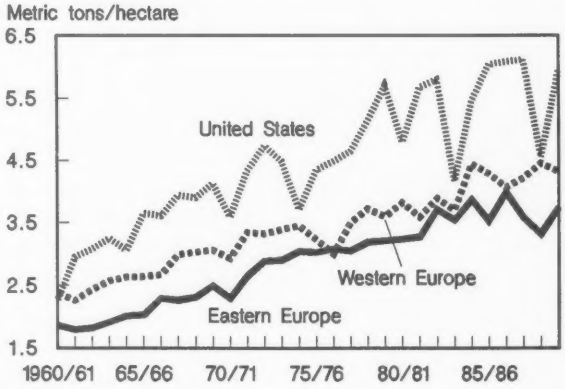
Corn is the leading grain fed in the region, but feed use of corn remains below the peak reached around 1980 because of reduced imports. Most of the drop occurred in Poland and, along with a reduction in protein meal imports, led to a sharp contraction in Polish poultry and pork production.

Since the mid-1980's, wheat has surpassed barley as the second most important feed grain. This mainly reflects the large increase in wheat production, while production and use of barley has been fairly steady. Other grains—rye, oats, and mixed grains—trail barley by a large margin. Most of the oats are fed in Poland, which has a large number of horses.

Inadequate feed supplies, particularly protein feeds, have been a chronic problem in the region. Even in Hungary, the region's most successful poultry producer, protein feeds are perennially short. In recent years, Poland has increased poultry output by substituting barley, wheat, and other domestically produced feeds for corn in rations at the cost of lower feed conversion efficiency. Only East Germany has had sufficient feed supplies in recent years and reported gains in feeding efficiency. But East Germany also has emphasized pork production which is better able than poultry to use locally available feedstuffs.

Non-grain feeds are also important in Eastern Europe and probably became more critical during the 1980's. Many farmers rely on potatoes, other vegetables, crop residues, garbage, and other local feedstuffs. In addition, much of the region is quite dependent on forage supplies, which are subject to damage from poor weather. Recently some countries in the region have also started to import large amounts of tapioca from Thailand.

Figure A-1
Coarse Grain Yields



1989/90 forecast.

The Livestock Sector

Eastern Europe is a major producer of livestock and poultry, and as a region is a large net exporter of livestock products.

Some live animals are also exported. Meat exports are a vital source of hard currency earnings. However, in some of the countries, such as Romania and Poland, the need to furnish more meat for domestic consumption could reduce exports in the near term.

Eastern Europe is the world's largest pork exporter and its estimated per capita pork consumption is the highest in the world at 44 kilograms per year. Production has been relatively flat for the last few years, with some annual fluctuations. The region's pork exports have been fairly constant since the mid-1980's, after doubling between 1975 and 1984. To export higher quality pork, Poland imports some low quality pork from China for the domestic market, an indication of the importance of exports.

Beef and veal production follows pork in importance and has similarly shown little or no growth since the mid-1970's. Cattle inventories have declined steadily in recent years because of unfavorable relative prices.

Poultry production has grown during the 1980's, despite problems in Poland, formerly the region's top producer, and is approaching the level of beef and veal. Since 1985, Poland's production has started to rebound but output remains below its 1981 peak. Consumption of poultry meat for the region as a whole has been static in recent years. However, this is only because declines in Romania have offset gains in most of the other countries.

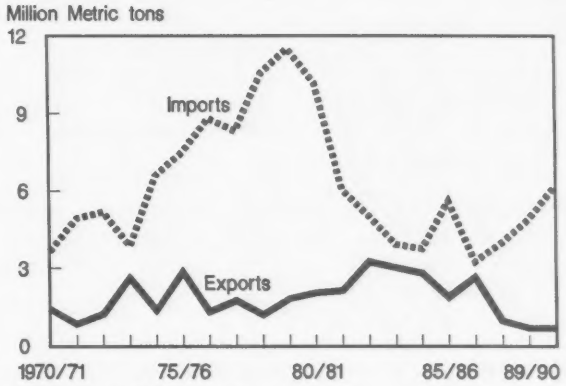
Hungary has ranked among the world's largest exporters of poultry meat for the last decade. Romania's exports soared in the late 1980's, but at the cost of squeezing domestic consumers. The new government has halted exports, at least temporarily, and recently Romania bought 15,000 tons of poultry meat from the United States.

Per capita consumption of total meats is highest in Hungary and East Germany, which compare favorably with Western Europe, and lowest in Yugoslavia and Romania. Poland's consumption has edged up in the last few years, but remains below the high point reached in 1980.

Coarse Grain Imports and the U.S. Share

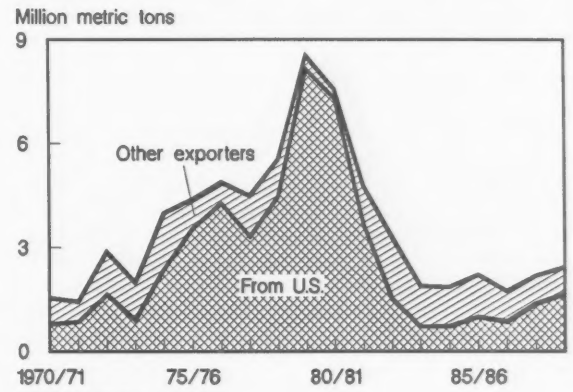
Eastern Europe as a region is usually a large net importer of coarse grains. In most years, corn is the largest import, accounting for over 50 percent of the total, followed by barley and minor amounts of rye, sorghum, and oats. During the mid-1970's coarse grain imports began to increase sharply, stimulated by cheap and easily available credit (fig. A-2). After peaking at 11.5 million tons in 1979/80, imports started to decline, averaging under 5 million between 1981/82 and 1988/89. Protein meal imports, which also increased in the 1970's, have not declined as sharply.

Figure A-2
East European Coarse Grain Trade



1989/90 forecast. October/September years.

Figure A-3
East European Corn Imports and U.S. Share



October/September years.

Much of the region's coarse grain imports has been in response to production shortfalls caused by bad weather, and thus have displayed considerable variability. The main exceptions have been East Germany, a relatively steady buyer, and Poland during the late 1970's credit-induced import boom. The forecast surge in Eastern Europe's 1989/90 imports reflects substantial unmet demand that has been held in check by financial and political constraints.

U.S. coarse grain exports to the region averaged about 3.5 million tons in the 1970's and about 2.2 million in the 1980's. The U.S. share of the East European market averaged 44 percent in the 1970's, and reached about 75 percent in 1979/80 and 1980/81. Since 1981/82, it has averaged 34 percent. Most of the U.S. sales have been corn (fig. A-3). In recent years, the EC has also increased corn sales to Eastern Europe.

Poland and East Germany were the largest U.S. corn markets in the region during the 1970's. During the peak years of 1975-81, U.S. sales averaged about 1.7 million tons to each. U.S. exports to Romania also exceeded 1 million tons twice in this period. Since then, East Germany has emerged as the leading market, but at a much lower level, averaging about 540,000 tons per year, followed by Bulgaria at about 360,000 tons. U.S. corn exports to Poland have dropped to virtually nothing in recent years (fig. A-4).

The United States also exports barley to Eastern Europe, but more irregularly. Smaller amounts of sorghum are shipped occasionally. Since 1986, most U.S. barley sales have been under the Export Enhancement Program (EEP). Romania, Bulgaria, Poland and Hungary have been EEP recipients, although the latter has bought none of the 100,000-ton offer. Romania has not purchased EEP barley since 1986, but it still has 75,000 tons available under an initiative for 200,000 tons. Poland has bought 228,000 tons of barley and 310,000 tons of sorghum under EEP. Its last EEP purchase was in March 1989, but it has 162,000 tons of either barley or sorghum available from its last offer. Bulgaria completed its EEP initiative for 150,000 tons of barley in late 1988.

The EC and Canada are Eastern Europe's main barley suppliers. In the early to mid-1980's, East Germany purchased large amounts of barley from Canada under a trade agreement that cut into U.S. corn sales. Since 1987/88, however, the EC has been the dominant barley supplier. When prices were favorable, feed quality wheat has also been imported, but it is not clear that all the wheat was used for feeding. There has also been substantial intra-trade in coarse grains within Eastern Europe. Much of this has been under countertrade agreements, such as coal from Poland in exchange for corn from Romania.

U.S. market development in Poland during the 1970's was highly dependent on credit. Poland was among the top two or three recipients of U.S. CCC export credit sales for most of the 1970's, and frequently was the single largest recipient of credit lines for corn, sorghum, and soybean meal. However, with Poland's political and financial crises of the early 1980's, credit offers were suspended after Poland failed to make repayments. The outlook for future U.S. credit guarantees is uncertain.

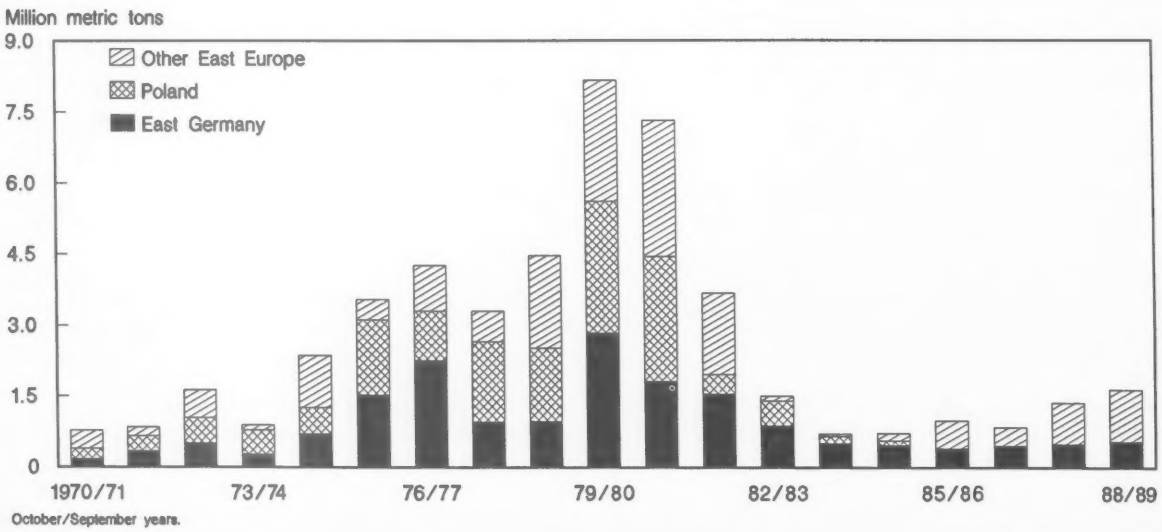
Coarse Grain Exports

Eastern Europe has a long history of corn exports. Romania was the world's second largest corn exporter in the 1920's and much of the 1930's, ranking behind Argentina and ahead of the United States. Until the late 1930's, Yugoslavia's exports and occasionally Hungary's were also larger than U.S. exports.

During the 1980's, the region's coarse grain exports averaged around 2.2 million tons, up about 500,000 from the average of the previous decade. Corn provided about two-thirds of the total, followed by barley, and small amounts of oats and rye. Rye exports were quite irregular.

Mirroring frequent fluctuations in production, exports have been highly variable, especially for individual countries. For example, Yugoslavia switched from a record net corn export position of 1.5 million tons in 1986/87 to a net importer of 300,000 tons the next year. In rare years, the region as a

Figure A-4
U.S. Corn Exports to Eastern Europe



whole has been a net corn exporter. The leading exporters have been Yugoslavia, Romania, and Hungary. In Romania, it has recently become apparent that, like meat, corn exports often came at the expense of domestic users.

The Soviet Union has generally been the leading destination for Eastern Europe's exports. During the 1980's, it is estimated that the Soviets took nearly 50 percent of the region's corn shipments. It is likely that exports to the USSR have been required to meet trade agreement obligations, and, as with trade within the region, these may have involved countertrade. Corn exports within the region accounted for around 40 percent of the total. Sales to countries outside of the East Bloc, including Western Europe, North Africa, and the Middle East, are attractive as a means of earning hard currency, but have been comparatively small.

Uncertainty Dominates Outlook

Because of financial constraints, Eastern Europe's coarse grain imports are unlikely to grow significantly in the next few years without outside assistance. The outlook for renewed import growth over the longer term hinges on many factors, including policy changes, economic growth, coarse grain production trends, meat consumption and production patterns, and possible changes in the direction of trade.

Much of Eastern Europe has the physical potential to produce more grain under improved conditions, such as increased incentives, better management, timely and appropriate input use, and a more rational price structure. In general, the agricultural sectors have suffered as a result of central planning, inefficient resource allocation, and poor incentives. Prices have played a limited role, but this is beginning to change, with the pace varying considerably among the different countries. However, there will be short-term disruption associated with change. For example, farmers in much of the region, particularly in Poland, are currently holding back commodities for numerous reasons, including spiralling inflation, low procurement prices, and problems with input costs and availability.

Eastern Europe's potential to increase coarse grain exports will depend not only on production gains, but also on trends in the livestock sector and domestic feed demand. Current consumption levels indicate potential for gains in domestic meat consumption, but pressure will remain to maintain or expand export earnings from meat and products. If Eastern Europe's numerous subsidies are reduced by economic reforms, retail meat prices could increase substantially and hold down demand, at least temporarily. Loss of subsidies could also affect meat production and exports. For example, there are indications that the costs of Hungary's meat exports are higher than returns. This suggests that Hungary might be more competitive as an exporter of grain rather than meat.

The spectacular events of recent months may eventually have a substantial impact on Eastern Europe's agricultural production, consumption, and trade. Limited investment and scarce capital suggest that economic growth could be slow, while movement toward democratic political structures and a more market-oriented economy is likely to increase uncertainty about performance in the short term.

The nature of the region could change quickly if East Germany is unified with West Germany. And, market forces could still be obscured if Eastern Europe adopts EC-style agricultural policies involving subsidies, import restrictions, and other interventions. Until the nature of reforms become more clear, it will be difficult to predict the future direction of Eastern Europe's coarse grain sector.

LIST OF TABLES

Appendix Tables

N O T E: In the past, imports and exports in the Supply and Disappearance (S&D) tables have included primary products converted to whole grain equivalent. This practice results in a small amount of double counting and some distortation in the categories of use. Starting with this report, only imports and exports of grain will be included in the S&D tables. The S&D tables for each of the feed grains, and the summary feed grain table, have been revised from 1975/76 to date incorporating this change. These tables also include the final estimates for U.S. production and stocks for 1982-1987 released in December by the National Agricultural Statistics Service.

The data on exports and imports of grain and primary products converted to grain equivalent will continue to be published in Table 12 (Corn, sorghum, barley, and oats exports) and Table 13 (Corn, sorghum, barley, and oats imports).

Appendix table 1--Corn, sorghum, oats, barley: Farm price, planted acreage, h

Year beginning Sept. 1	Corn				Yield harve ac
	Farm price	Planted acreage	Harvested for grain	Production	
	$/bu.	---1,000 acres---		1,000 bushels	Bush
1950	1.52	82,859	72,398	2,764,071	38
1951	1.66	83,275	71,191	2,628,937	36
1952	1.52	82,230	71,353	2,980,793	4
1953	1.48	81,574	70,738	2,881,801	4
1954	1.43	82,185	68,668	2,707,913	39
1955	1.35	80,932	68,462	2,872,959	42
1956	1.29	77,828	64,877	3,075,336	4
1957	1.11	73,180	63,065	3,045,355	48
1958	1.12	73,351	63,549	3,356,205	5
1959	1.05	82,742	72,091	3,824,598	5
1960	1.00	81,425	71,422	3,906,949	54
1961	1.10	65,919	57,634	3,597,803	6
1962	1.12	65,017	55,726	3,606,311	6
1963	1.11	68,771	59,227	4,019,238	6
1964	1.17	65,823	55,369	3,484,253	6
1965	1.16	65,171	55,392	4,102,867	7
1966	1.24	66,347	57,002	4,167,608	7
1967	1.03	71,156	60,694	4,860,372	8
1968	1.08	65,126	55,980	4,449,542	7
1969	1.16	64,264	54,574	4,687,057	8
1970	1.33	66,863	57,358	4,152,243	7
1971	1.08	74,179	64,123	5,646,260	8
1972	1.57	67,126	57,513	5,579,832	9
1973	2.55	72,253	62,143	5,670,712	9
1974	3.02	77,935	65,405	4,701,402	7
1975	2.54	78,719	67,625	5,840,757	8
1976	2.15	84,588	71,506	6,289,169	8
1977	2.02	84,328	71,614	6,505,041	9
1978	2.25	81,675	71,930	7,267,927	10
1979	2.48	81,394	72,400	7,928,139	10
1980	3.12	84,043	72,961	6,639,396	9
1981	2.47	84,097	74,524	8,118,650	10
1982	2.55	81,857	72,719	8,235,101	11
1983	3.21	60,207	51,479	4,174,251	8
1984	2.63	80,517	71,897	7,672,130	10
1985	2.23	83,398	75,209	8,875,453	11
1986 2/	1.50	76,580	68,907	8,225,764	11
1987	1.94	66,200	59,505	7,131,300	11
1988	2.54	67,717	58,250	4,928,681	8
1989 3/	NA	72,296	64,781	7,527,152	11

See footnotes at end of table.

ge, harvested acreage, production, and yield, 1950 to date 1/

Yield per harvested acre	Sorghum				
	Farm price	Planted acreage	Harvested for grain	Production	Yield per harvested acre
Bushels	$/cwt	---1,000 acres---		1,000 bushels	Bushels
38.2	1.88	16,055	10,346	233,536	22.6
36.9	2.36	15,028	8,544	162,863	19.1
41.8	2.82	12,289	5,326	90,741	17.0
40.7	2.36	14,590	6,295	115,719	18.4
39.4	2.25	20,148	11,718	235,575	20.1
42.0	1.74	23,921	12,891	242,638	18.8
47.4	2.05	21,384	9,209	204,881	22.2
48.3	1.74	26,886	19,682	567,506	28.8
52.8	1.78	20,675	16,524	581,012	35.2
53.1	1.53	19,508	15,406	555,441	36.1
54.7	1.49	19,598	15,601	619,954	39.7
62.4	1.80	14,294	10,985	480,208	43.7
64.7	1.82	15,060	11,571	510,284	44.1
67.9	1.74	17,516	13,326	585,394	43.9
62.9	1.88	16,770	11,742	489,796	41.7
74.1	1.76	17,079	13,029	672,698	51.6
73.1	1.82	16,372	12,813	714,992	55.8
80.1	1.77	18,945	14,988	755,344	50.4
79.5	1.69	17,793	13,890	731,277	52.6
85.9	1.91	17,231	13,437	729,919	54.3
72.4	2.04	16,957	13,568	683,179	50.4
88.1	1.86	20,547	16,142	867,997	53.8
97.0	2.45	17,035	13,212	801,350	60.7
91.3	3.82	18,994	15,700	923,224	58.8
71.9	4.95	17,588	13,809	622,711	45.1
86.4	4.23	18,080	15,403	754,354	49.0
88.0	3.62	18,143	14,466	710,797	49.1
90.8	3.25	16,636	13,797	780,944	56.6
101.0	3.59	16,197	13,410	731,270	54.5
109.5	4.19	15,277	12,901	807,422	62.6
91.0	5.19	15,639	12,513	579,343	46.3
108.9	4.01	15,930	13,677	875,835	64.0
113.2	4.41	16,028	14,137	835,083	59.1
81.1	4.89	11,880	10,001	487,521	48.7
106.7	4.15	17,254	15,355	866,241	56.4
118.0	3.45	18,285	16,782	1,120,271	66.8
119.4	2.45	15,339	13,862	938,869	67.7
119.8	3.04	11,756	10,531	730,809	69.4
84.6	4.05	10,343	9,042	576,686	63.8
116.2	NA	12,642	11,153	617,860	55.4

Continued--

Appendix table 1--Corn, sorghum, oats, barley: Farm price, planted acreage,

Year beginning June 1	Oats				
	Farm price	Planted acreage	Harvested for grain	Production	Yiel harv ac
	$/bu.	---1,000 acres---		1,000 bushels	Bus
1950	0.79	45,044	39,306	1,369,199	
1951	0.82	41,015	35,233	1,277,647	
1952	0.79	42,341	37,012	1,217,433	
1953	0.74	43,220	37,536	1,153,205	
1954	0.71	46,898	40,551	1,409,601	
1955	0.60	47,494	39,027	1,495,978	
1956	0.69	44,205	33,333	1,151,398	
1957	0.61	41,840	34,065	1,289,880	
1958	0.58	37,699	31,247	1,401,410	
1959	0.65	35,064	27,758	1,050,051	
1960	0.60	31,419	26,588	1,153,332	
1961	0.64	32,314	23,886	1,010,314	
1962	0.62	29,500	22,377	1,012,197	
1963	0.62	28,054	21,308	965,510	
1964	0.63	25,634	19,759	852,257	
1965	0.62	24,046	18,522	929,554	
1966	0.67	23,343	17,877	803,324	
1967	0.66	20,719	16,110	793,800	
1968	0.60	23,342	17,708	950,689	
1969	0.58	23,561	17,971	965,863	
1970	0.62	24,410	18,594	915,236	
1971	0.60	21,831	15,705	878,079	
1972	0.72	19,990	13,410	690,616	
1973	1.18	18,605	13,770	659,136	
1974	1.53	17,013	12,608	600,655	
1975	1.46	16,434	13,038	638,960	
1976	1.56	16,620	11,834	540,441	
1977	1.09	17,732	13,485	752,774	
1978	1.20	16,407	11,126	581,657	
1979	1.33	13,960	9,682	526,748	
1980	1.72	13,381	8,657	458,792	
1981	1.88	13,632	9,407	509,529	
1982	1.49	13,951	10,258	592,630	
1983	1.62	20,289	9,072	476,961	
1984	1.67	12,414	8,163	473,661	
1985	1.23	13,255	8,177	520,800	
1986	1.21	14,691	6,860	386,356	
1987	1.56	17,907	6,888	373,713	
1988	2.61	13,910	5,533	217,600	
1989 3/	NA	12,080	6,874	373,778	

NA = Not available.
1/ Revised prices received by farmers, 1979 to date reflecting January 30
on U.S. monthly prices weighted by monthly marketings. Prices do not inclu
2/ Crop year began October 1 prior to 1986. 3/ Preliminary.

Source: Agricultural Statistics Board, National Agricultural Statistics

eage, harvested acreage, production, and yield, 1950 to date 1/--Continued

Yield per harvested acre	Barley				
	Farm price	Planted acreage	Harvested for grain	Production	Yield per harvested acre
Bushels	$/bu.	---1,000 acres---		1,000 bushels	Bushels
34.8	1.19	13,010	11,155	303,772	27.2
36.3	1.26	10,790	9,424	257,213	27.3
32.9	1.37	9,190	8,236	228,168	27.7
30.7	1.17	9,615	8,680	246,723	28.4
34.8	1.09	14,740	13,370	379,254	28.4
38.3	0.92	16,293	14,523	403,065	27.8
34.5	0.99	14,732	12,852	376,661	29.3
37.9	0.89	16,398	14,872	442,761	29.8
44.8	0.90	16,150	14,791	477,368	32.3
37.8	0.86	16,766	14,869	420,203	28.3
43.4	0.84	15,527	13,856	429,005	31.0
42.3	0.98	15,623	12,806	392,441	30.6
45.2	0.92	14,380	12,214	427,726	35.0
45.3	0.90	13,452	11,236	392,833	35.0
43.1	0.95	11,652	10,277	386,059	37.6
50.2	1.02	10,123	9,166	393,055	42.9
44.9	1.06	11,184	10,250	392,108	38.3
49.3	1.01	10,077	9,230	373,745	40.5
53.7	0.92	10,486	9,732	426,151	43.8
53.7	0.89	10,291	9,557	427,055	44.7
49.2	0.97	10,476	9,712	416,091	42.8
55.9	0.99	11,061	10,104	462,423	45.8
51.5	1.21	10,567	9,645	421,719	43.7
47.9	2.14	11,045	10,295	417,434	40.5
47.6	2.81	8,713	7,930	298,669	37.7
49.0	2.42	9,373	8,617	379,162	44.0
45.7	2.25	9,301	8,439	383,007	45.4
55.8	1.78	10,778	9,728	427,784	44.0
52.3	1.92	9,989	9,248	454,759	49.2
54.4	2.27	8,116	7,527	383,201	50.9
53.0	2.79	8,320	7,260	361,135	49.7
54.2	2.48	9,618	9,038	473,512	52.4
57.8	2.18	9,549	9,013	515,935	57.2
52.6	2.47	10,422	9,731	508,925	52.3
58.0	2.29	11,957	11,231	599,204	53.4
63.7	1.98	13,156	11,603	591,383	51.0
56.3	1.61	13,059	12,007	610,522	50.8
54.3	1.81	10,929	9,957	521,499	52.4
39.3	2.79	9,831	7,636	289,994	38.0
54.4	NA	9,175	8,303	403,443	48.6

ry 30, 1987 Agricultural Prices report. U.S. average prices based
include an allowance for loans outstanding and Government purchases.

tics Service, USDA.

Appendix table 2--Feed grains: Marketing year supply and disappearance, 1

Year 2/	Supply				Food, alcohol, and industrial
	Beginning stocks	Production	Imports	Total	
					M
1975/76	21.1	185.1	0.3	206.5	16.4
1976/77	23.9	194.0	0.3	218.2	17.1
1977/78	37.0	205.3	0.2	242.5	18.1
1978/79	50.3	221.5	0.2	272.0	19.1
1979/80	57.7	237.9	0.2	295.8	20.0
1980/81	63.8	197.9	0.2	261.9	19.2
1981/82	44.2	246.2	0.2	290.6	24.0
1982/83	77.9	250.2	0.2	328.4	26.5
1983/84	108.6	136.4	0.6	245.5	28.4
1984/85	39.6	236.8	0.7	277.1	31.4
1985/86	57.5	274.3	0.8	332.5	33.5
1986/87	126.4	251.6	0.7	378.7	34.2
1987/88	152.1	216.5	1.0	369.6	35.6
1988/89	133.6	149.3	1.2	284.2	36.3
1989/90 4/	65.9	221.1	1.1	288.1	39.0

--- = Not applicable.
1/ Aggregated data on corn, sorghum, barley, and oats. 2/ The marketing
barley, June 1. 3/ Includes total Government loans (original and reseal)

ce, 1975/76-1989/90 1/

	Disappearance					Ending Stocks		
	Domestic use							
, and al	Seed	Feed and residual	Total	Exports	Total disappearance	Govt. owned	Privately owned 3/	Total
	Million metric tons							
	1.5	115.8	133.7	48.9	182.5		23.6	23.9
	1.6	112.8	131.5	49.8	181.2	0.0	37.0	37.0
	1.5	117.4	137.0	55.2	192.2	0.2	50.1	50.3
	1.3	134.6	155.1	59.2	214.3	3.8	54.0	57.7
	1.3	140.1	161.4	70.6	232.0	7.9	55.9	63.8
	1.1	127.4	147.7	70.0	217.6	7.4	36.8	44.2
	1.4	127.7	153.1	59.5	212.6	8.3	69.7	77.9
	1.4	139.4	167.3	52.6	219.9	33.5	75.0	108.6
	1.4	120.1	149.9	56.1	205.9	8.0	31.6	39.6
	1.5	130.6	163.5	56.1	219.6	8.9	48.6	57.5
	1.5	135.1	170.0	36.1	206.2	20.4	106.0	126.4
	1.4	145.1	180.7	45.9	226.6	48.7	103.4	152.1
	1.3	146.9	183.7	52.3	236.0	34.1	99.5	133.6
	1.2	119.4	156.9	61.3	218.3	19.5	46.4	65.9
	---	133.3	172.3	66.3	238.6	16.7	32.8	49.5

keting year for corn and sorghum begins September 1; for oats and seal). 4/ Projected.

Appendx table 3--Foreign coarse grains: Supply and disappearance, 1975/76-1989/90 1/

Year	Beginning stocks	Production	Feed	Total Disappearance	Imports	Adjusted imports 2/	Ending stocks
			Million metric tons				
Corn:							
1975/76	31.7	191.0	122.6	228.8	57.5	NA	36.1
1976/77	36.1	196.1	120.7	235.2	57.3	NA	38.7
1977/78	38.7	199.8	131.7	246.6	62.9	NA	40.1
1978/79	40.1	207.2	137.6	259.8	69.9	NA	41.1
1979/80	41.1	223.6	159.2	279.9	79.1	73.9	45.8
1980/81	45.8	240.1	168.4	297.6	79.1	78.1	48.9
1981/82	48.9	235.1	175.9	291.0	77.6	67.3	43.8
1982/83	43.8	230.3	174.6	281.2	73.2	63.3	39.1
1983/84	39.1	241.4	167.7	288.5	64.9	61.1	39.8
1984/85	39.8	263.9	183.6	303.3	72.5	66.6	47.4
1985/86	47.4	253.8	185.7	290.9	62.1	54.3	41.2
1986/87	41.2	267.3	194.3	309.2	61.1	56.4	37.2
1987/88	37.2	266.8	194.5	309.5	62.7	57.0	38.1
1988/89 3/	38.1	273.4	210.8	324.8	73.4	64.3	38.4
1989/90 4/	38.4	268.9	216.6	330.7	75.8	70.9	34.4
Sorghum:							
1975/76	7.2	44.7	18.5	50.7	10.2	NA	7.1
1976/77	7.1	44.1	22.1	50.6	12.4	NA	7.1
1977/78	7.1	44.6	21.0	50.0	10.9	NA	7.3
1978/79	7.3	45.0	22.2	49.9	11.1	NA	7.3
1979/80	7.3	41.0	21.5	49.7	12.4	11.6	6.9
1980/81	6.9	44.6	23.3	50.8	12.8	14.1	8.1
1981/82	8.1	48.1	28.5	55.5	14.3	13.7	7.4
1982/83	7.4	44.0	25.2	50.5	12.3	11.6	6.1
1983/84	6.1	46.5	25.7	52.3	13.1	13.0	6.5
1984/85	6.5	44.0	26.1	52.1	12.9	13.1	6.0
1985/86	6.0	41.9	24.9	47.4	9.6	8.8	5.0
1986/87	5.0	40.6	23.3	46.4	8.1	7.8	4.2
1987/88	4.2	37.6	22.7	44.7	8.7	8.3	3.0
1988/89 3/	3.0	40.6	25.0	47.7	10.9	10.8	3.8
1989/90 4/	3.8	40.7	23.0	47.6	8.7	8.4	3.3
Barley:							
1975/76	20.1	132.9	92.1	135.3	13.5	NA	18.0
1976/77	18.0	166.5	112.6	164.5	13.5	NA	21.2
1977/78	21.2	154.6	108.3	158.3	14.4	NA	18.5
1978/79	18.5	173.5	117.1	170.5	13.5	NA	21.9
1979/80	21.9	152.4	113.1	158.5	16.6	11.1	16.9
1980/81	16.9	155.4	107.5	156.7	16.3	13.8	17.1
1981/82	17.1	144.9	105.4	149.6	20.4	13.9	14.4
1982/83	14.4	155.6	107.8	152.9	17.2	13.1	17.9
1983/84	17.9	153.6	115.4	160.4	20.3	16.4	12.9
1984/85	12.9	162.5	115.8	157.7	23.1	17.9	19.1
1985/86	19.1	165.1	120.3	161.8	22.3	18.2	22.6
1986/87	22.6	169.1	125.7	167.8	24.1	18.4	26.7
1987/88	26.7	169.2	126.8	173.0	20.8	15.8	25.2
1988/89 3/	25.2	160.2	119.7	162.1	20.7	16.7	24.8
1989/90 4/	24.8	160.6	123.6	166.7	22.3	17.9	20.6
Total coarse grains: 5/							
1975/76	69.3	463.5	277.7	510.5	83.3	74.8	70.8
1976/77	70.8	510.0	305.8	552.4	85.7	83.6	78.0
1977/78	78.0	495.1	306.5	552.9	90.4	88.8	75.1
1978/79	75.1	533.3	329.2	586.5	96.9	92.8	80.9
1979/80	80.9	506.3	336.1	580.3	110.6	99.2	77.4
1980/81	77.4	534.0	342.0	599.9	110.3	108.1	81.5
1981/82	81.5	520.3	351.7	588.3	114.5	97.5	72.8
1982/83	72.8	533.6	357.2	585.5	104.0	89.5	73.2
1983/84	73.2	550.9	364.5	608.8	100.2	92.8	70.8
1984/85	70.8	578.1	377.3	618.4	111.2	99.6	85.9
1985/86	85.9	567.9	386.9	607.8	95.8	82.5	81.3
1986/87	81.3	581.6	396.0	626.6	95.2	83.5	81.4
1987/88	81.4	575.1	396.2	628.6	94.1	82.5	79.2
1988/89 3/	79.2	578.6	404.6	638.8	106.8	92.6	79.2
1989/90 4/	79.2	578.6	417.8	652.2	108.9	98.7	70.8

NA = Not available.
1/ Aggregated on basis of local marketing years, except for adjusted imports. 2/ Based on Oct./Sept. trade year and excludes intra-EC trade. 3/ Preliminary. 4/ Forecast.
5/ Includes oats, rye, millet, and mixed grains.

Source: Compiled from World Grain Situation and Outlook, Foreign Agricultural Service, and USDA data.

Appendix table 4--Corn: Marketing year supply and disappearance, specifie

Year beginning September 1	Supply				Do	
	Begin-ning stocks	Produc-tion	Imports	Total	Food, alcohol, and industrial	S
						Milli
1975/76						
Sept.-Nov.	558.0	5,840.8	0.2	6,399.0	123.8	
Dec.-Feb.	4,974.6	---	0.6	4,975.2	114.4	
Mar.-May	3,373.6	---	0.2	3,373.8	130.0	1
June-Aug.	1,868.8	---	0.5	1,869.3	132.5	
Mkt. year	558.0	5,840.8	1.5	6,400.3	500.7	2
1976/77						
Sept.-Nov.	633.2	6,289.2	0.5	6,922.9	130.3	
Dec.-Feb.	5,387.2	---	0.4	5,387.6	117.9	
Mar.-May	3,848.2	---	0.5	3,848.7	131.9	1
June-Aug.	2,370.0	---	1.0	2,371.0	142.0	
Mkt. year	633.2	6,289.2	2.4	6,924.8	522.1	2
1977/78						
Sept.-Nov.	1,135.6	6,505.0	0.6	7,641.2	138.9	
Dec.-Feb.	6,086.7	---	0.7	6,087.4	128.6	
Mar.-May	4,481.6	---	0.5	4,482.1	141.7	1
June-Aug.	2,861.1	---	0.6	2,861.7	152.3	
Mkt. year	1,135.6	6,505.0	2.4	7,643.0	561.5	1
1978/79						
Sept.-Nov.	1,435.9	7,267.9	0.1	8,703.9	146.7	
Dec.-Feb.	6,928.2	---	0.3	6,928.5	135.1	
Mar.-May	5,151.1	---	0.3	5,151.4	157.5	1
June-Aug.	3,287.2	---	0.4	3,287.6	149.2	
Mkt. year	1,435.9	7,267.9	1.1	8,704.9	588.5	1
1979/80						
Sept.-Nov.	1,709.5	7,928.1	0.2	9,637.8	151.5	
Dec.-Feb.	7,594.1	---	0.2	7,594.3	140.3	
Mar.-May	5,557.0	---	0.2	5,557.2	159.6	
June-Aug.	3,644.3	---	0.1	3,644.4	168.1	
Mkt. year	1,709.5	7,928.1	0.7	9,638.3	619.5	

See footnotes at end of table.

cified periods, 1975/76-1989/90

Disappearance					Ending stocks		
Domestic use			Exports	Total disappearance	Govt. owned	Privately owned 1/	Total
d Seed	Feed and residual	Total					
Million bushels							
0.0	927.7	1,051.5	372.9	1,424.4	0.3	4,974.3	4,974.6
0.0	1,060.4	1,174.8	426.8	1,601.6	0.2	3,373.4	3,373.6
16.1	912.5	1,058.6	446.4	1,505.0	0.4	1,868.4	1,868.8
4.0	681.3	817.8	418.3	1,236.1	0.2	633.0	633.2
20.1	3,581.9	4,102.7	1,664.4	5,767.1	0.2	633.0	633.2
0.0	936.6	1,066.9	468.8	1,535.7	0.2	5,387.0	5,387.2
0.0	1,038.9	1,156.8	382.6	1,539.4	0.1	3,848.1	3,848.2
16.1	899.8	1,047.8	430.9	1,478.7	0.3	2,369.7	2,370.0
4.0	726.6	872.6	362.8	1,235.4	0.2	1,135.4	1,135.6
20.1	3,601.9	4,144.1	1,645.1	5,789.2	0.2	1,135.4	1,135.6
0.0	1,016.5	1,155.4	399.1	1,554.5	0.2	6,086.5	6,086.7
0.0	1,069.3	1,197.9	407.9	1,605.8	0.4	4,481.2	4,481.6
15.6	939.4	1,096.7	524.3	1,621.0	0.4	2,860.7	2,861.1
3.9	704.5	860.7	565.1	1,425.8	3.5	1,432.4	1,435.9
19.5	3,729.7	4,310.7	1,896.4	6,207.1	3.5	1,432.4	1,435.9
0.0	1,160.2	1,306.9	468.8	1,775.7	60.3	6,867.9	6,928.2
0.0	1,229.0	1,364.1	413.3	1,777.4	95.2	5,055.9	5,151.1
15.6	1,136.5	1,309.6	554.6	1,864.2	100.6	3,186.6	3,287.2
3.9	748.7	901.8	676.3	1,578.1	100.5	1,609.0	1,709.5
19.5	4,274.4	4,882.4	2,113.0	6,995.4	100.5	1,609.0	1,709.5
0.0	1,270.9	1,422.4	621.3	2,043.7	99.6	7,494.5	7,594.1
0.0	1,299.3	1,439.6	597.7	2,037.3	100.1	5,456.9	5,557.0
16.0	1,149.5	1,325.1	587.8	1,912.9	213.5	3,430.8	3,644.3
4.0	843.3	1,015.4	594.7	1,610.1	260.1	1,774.2	2,034.3
20.0	4,563.0	5,202.5	2,401.5	7,604.0	260.1	1,774.2	2,034.3

Continued--

Appendix table 4--Corn: Marketing year supply and disappearance, specifie

Year beginning September 1	Supply				D	
	Beginning stocks	Production	Imports	Total	Food, alcohol, and industrial	S
					Milli	
1980/81						
Sept.-Nov.	2,034.3	6,639.4	0.3	8,674.0	168.7	
Dec.-Feb.	6,595.9	---	0.0	6,595.9	158.0	
Mar.-May	4,662.4	---	0.0	4,662.4	181.7	1
June-Aug.	2,773.5	---	0.5	2,774.0	189.4	
Mkt. year	2,034.3	6,639.4	0.8	8,674.5	697.8	2
1981/82						
Sept.-Nov.	1,392.1	8,118.7	0.1	9,510.9	188.8	
Dec.-Feb.	7,601.1	---	0.2	7,601.3	180.2	
Mar.-May	5,766.4	---	0.0	5,766.4	201.9	1
June-Aug.	3,880.1	---	0.2	3,880.3	206.9	
Mkt. year	1,392.1	8,118.7	0.5	9,511.3	777.8	1
1982/83						
Sept.-Nov.	2,536.6	8,235.1	0.2	10,771.9	217.5	
Dec.-Feb.	8,906.3	---	0.1	8,906.4	201.6	
Mar.-May	6,899.2	---	0.1	6,899.3	226.6	1
June-Aug.	4,923.9	---	0.1	4,924.0	234.6	
Mkt. year	2,536.6	8,235.1	0.5	10,772.2	880.3	1
1983/84						
Sept.-Nov.	3,523.1	4,174.3	0.4	7,697.8	238.6	
Dec.-Feb.	5,651.7	---	0.3	5,652.0	222.8	
Mar.-May	3,865.0	---	0.5	3,865.5	247.3	
June-Aug.	2,145.1	---	0.5	2,145.6	247.3	
Mkt. year	3,523.1	4,174.3	1.7	7,699.1	956.0	
1984/85						
Sept.-Nov.	1,006.3	7,672.1	0.7	8,679.1	249.7	
Dec.-Feb.	6,631.1	---	0.1	6,631.2	241.5	
Mar.-May	4,623.2	---	0.8	4,624.0	283.8	
June-Aug.	2,835.5	---	0.1	2,835.6	295.0	
Mkt. year	1,006.3	7,672.1	1.7	8,680.1	1,070.0	

See footnotes at end of table.

cified periods, 1975/76-1989/90--Continued

Disappearance					Ending stocks		
Domestic use			Exports	Total disappearance	Govt. owned	Privately owned 1/	Total
d Seed	Feed and residual	Total					
Million bushels							
0.0	1,221.5	1,390.2	687.9	2,078.1	256.7	6,339.2	6,595.9
0.0	1,129.5	1,287.5	646.0	1,933.5	252.3	4,410.1	4,662.4
16.2	1,077.0	1,274.9	614.0	1,888.9	251.6	2,521.9	2,773.5
4.0	745.2	938.6	443.3	1,381.9	241.8	1,150.3	1,392.1
20.2	4,173.2	4,891.2	2,391.2	7,282.4	241.8	1,150.3	1,392.1
0.0	1,201.9	1,390.7	519.1	1,909.8	243.6	7,357.5	7,601.1
0.0	1,184.5	1,364.7	470.2	1,834.9	259.3	5,507.1	5,766.4
16.0	1,072.6	1,290.5	595.8	1,886.3	269.7	3,610.4	3,880.1
3.4	721.8	932.1	411.6	1,343.7	280.1	2,256.5	2,536.6
19.4	4,180.8	4,978.0	1,996.7	6,974.7	280.1	2,256.5	2,536.6
0.0	1,205.0	1,422.5	443.1	1,865.6	372.0	8,534.3	8,906.3
0.0	1,296.0	1,497.6	509.6	2,007.2	470.8	6,428.4	6,899.2
11.6	1,261.9	1,500.1	475.3	1,975.4	491.7	4,432.2	4,923.9
2.9	770.1	1,007.6	393.3	1,400.9	1,142.7	2,380.4	3,523.1
14.5	4,533.0	5,427.8	1,821.3	7,249.1	1,142.7	2,380.4	3,523.1
0.0	1,314.1	1,552.7	493.4	2,046.1	1,227.0	4,424.7	5,651.7
0.0	1,058.3	1,281.1	505.9	1,787.0	1,214.0	2,651.0	3,865.0
16.8	942.9	1,207.0	513.4	1,720.4	195.0	1,950.1	2,145.1
2.3	516.0	765.6	373.7	1,139.3	201.5	804.8	1,006.3
19.1	3,831.3	4,806.4	1,886.4	6,692.8	201.5	804.8	1,006.3
0.0	1,295.1	1,544.8	503.2	2,048.0	206.7	6,424.4	6,631.1
0.0	1,186.1	1,427.6	580.4	2,008.0	209.7	4,413.5	4,623.2
17.0	1,013.0	1,313.8	474.7	1,788.5	221.7	2,613.8	2,835.5
4.2	596.3	895.5	291.9	1,187.4	224.9	1,423.3	1,648.2
21.2	4,090.5	5,181.7	1,850.2	7,031.9	224.9	1,423.3	1,648.2

Continued--

Appendix table 4--Corn: Marketing year supply and disappearance, speci

Year beginning September 1	Supply				Food, alcohol, and industrial
	Beginning stocks	Production	Imports	Total	
					Mi
1985/86					
Sept.-Nov.	1,648.2	8,875.5	0.9	10,524.6	278.0
Dec.-Feb.	8,614.7	---	1.0	8,615.7	264.0
Mar.-May	6,587.1	---	2.2	6,589.3	293.0
June-Aug.	4,990.0	---	5.9	4,995.9	305.0
Mkt. year	1,648.2	8,875.5	10.0	10,533.7	1,140.0
1986/87					
Sept.-Nov.	4,039.5	8,225.8	0.7	12,266.0	280.0
Dec.-Feb.	10,305.5	---	0.2	10,305.7	270.0
Mar.-May	8,248.2	---	0.4	8,248.6	310.0
June-Aug.	6,332.2	---	0.4	6,332.6	315.0
Mkt. year	4,039.5	8,225.8	1.7	12,267.0	1,175.0
1987/88					
Sept.-Nov	4,881.7	7,131.3	0.5	12,013.5	292.0
Dec.-Feb.	9,771.0	---	0.7	9,771.7	282.0
Mar.-May	7,635.6	---	1.4	7,637.0	315.0
June-Aug.	5,839.2	---	0.8	5,840.0	323.0
Mkt. year	4,881.7	7,131.3	3.5	12,016.5	1,212.0
1988/89					
Sept.-Nov	4,259.1	4,928.7	0.6	9,188.4	294.0
Dec.-Feb.	7,071.6	---	0.6	7,072.2	284.0
Mar.-May	5,203.9	---	1.2	5,205.1	320.2
June-Aug.	3,419.3	---	0.4	3,419.7	328.2
Mkt. year	4,259.1	4,928.7	2.8	9,190.6	1,226.4
1989/90					
Sept.-Nov	1,930.4	7,527.2	0.6	9,458.2	300.0
Dec.-Feb.					
Mar.-May					
June-Aug.					
Mkt. year 2/	1,930.4	7,527.2	2.1	9,459.7	---1

--- = Not applicable.
1/ Includes quantity under loan and farmer-owned reserve. 2/ Projec

specified periods, 1975/76-1989/90--Continued

Disappearance						Ending stocks		
Domestic use								
d, and rial	Seed	Feed and residual	Total	Exports	Total disap-pearance	Govt. owned	Privately owned 1/	Total
Million bushels								
.0	0.0	1,217.1	1,495.1	414.8	1,909.9	388.6	8,226.1	8,614.7
.0	0.0	1,304.4	1,568.4	460.2	2,028.6	509.4	6,077.7	6,587.1
.0	16.1	1,088.8	1,397.9	201.4	1,599.3	550.9	4,439.1	4,990.0
.0	3.4	542.2	850.6	105.8	956.4	545.7	3,493.8	4,039.5
.0	19.5	4,152.5	5,312.0	1,182.2	6,494.2	545.7	3,493.8	4,039.5
.0	0.0	1,362.3	1,642.3	318.2	1,960.5	968.2	9,337.3	10,305.5
.0	0.0	1,474.7	1,744.7	312.8	2,057.5	1,362.2	6,886.0	8,248.2
.0	16.4	1,093.9	1,420.3	496.1	1,916.4	1,491.5	4,840.7	6,332.2
.0	0.3	770.3	1,085.6	365.3	1,450.9	1,443.2	3,438.5	4,881.7
.0	16.7	4,701.2	5,892.9	1,492.4	7,385.3	1,443.2	3,438.5	4,881.7
.0	0.0	1,554.9	1,846.9	395.6	2,242.5	1,683.4	8,087.6	9,771.0
.0	0.0	1,449.4	1,731.4	404.7	2,136.1	1,767.7	5,867.9	7,635.6
.0	16.7	956.4	1,288.1	509.7	1,797.8	1,304.9	4,534.3	5,839.2
.0	0.5	851.0	1,174.5	406.4	1,580.9	835.0	3,424.1	4,259.1
.0	17.2	4,811.7	6,040.9	1,716.4	7,757.4	835.0	3,424.1	4,259.1
.0	0.0	1,352.0	1,646.0	470.8	2,116.8	611.0	6,460.6	7,071.6
.0	0.0	1,081.7	1,365.7	502.6	1,868.3	465.0	4,738.9	5,203.9
.2	16.8	857.2	1,194.2	591.6	1,785.8	417.7	3,001.6	3,419.3
.2	1.9	695.8	1,025.9	463.4	1,489.3	400.0	1,530.4	1,930.4
.4	18.7	3,979.7	5,224.1	2,028.4	7,260.2	400.0	1,530.4	1,930.4
.0	0.0	1,496.8	1,796.8	582.3	2,379.1	628.2	6,450.9	7,079.1
---1,305.0--		4,400.0	5,705.0	2,275.0	7,980.1	400.0	1,079.6	1,479.6

rojected.

Appendix table 5--Sorghum: Marketing year supply and disappearance, speci

Year beginning September 1	Supply				Food, alcohol, and industrial
	Beginning stocks	Production	Imports	Total	
					Milli
1975/76					
Sept.-May	65.3	754.4	0.0	819.7	6.9
June-Aug.	154.0	0.0	0.0	154.0	1.9
Mkt. year	65.3	754.4	0.0	819.7	8.8
1976/77					
Sept.-May	82.3	710.8	0.0	793.1	6.7
June-Aug.	195.7	0.0	0.0	195.7	1.9
Mkt. year	82.3	710.8	0.0	793.1	8.6
1977/78					
Sept.-May	117.3	780.9	0.0	898.2	7.1
June-Aug.	319.1	0.0	0.0	319.1	2.3
Mkt. year	117.3	780.9	0.0	898.2	9.4
1978/79					
Sept.-May	216.4	731.3	0.0	947.7	7.7
June-Aug.	322.2	0.0	0.0	322.2	2.3
Mkt. year	216.4	731.3	0.0	947.7	10.0
1979/80					
Sept.-May	207.9	807.4	0.0	1,015.3	8.3
June-Aug.	277.6	0.0	0.0	277.6	2.1
Mkt. year	207.9	807.4	0.0	1,015.3	10.4
1980/81					
Sept.-May	177.9	579.3	0.0	757.2	7.2
June-Aug.	184.5	0.0	0.0	184.5	1.9
Mkt. year	177.9	579.3	0.0	757.2	9.1
1981/82					
Sept.-May	130.3	875.8	0.0	1,006.1	6.8
June-Aug.	379.5	0.0	0.0	379.5	2.0
Mkt. year	130.3	875.8	0.0	1,006.1	8.8
1982/83					
Sept.-May	318.6	835.1	0.0	1,153.7	6.0
June-Aug.	529.1	0.0	0.0	529.1	1.9
Mkt. year	318.6	835.1	0.0	1,153.7	7.9

See footnotes at end of table.

specified periods, 1975/76-1989/90

Disappearance					Ending stocks		
Domestic use			Exports	Total disappearance	Govt. owned	Privately owned 1/	Total
, nd ial	Seed	Feed and residual	Total				
Million bushels							
	1.6	477.4	485.9	179.8	665.7	0.0	154.0	154.0
	0.7	16.7	19.3	52.4	71.7	0.0	82.3	82.3
	2.3	494.1	505.2	232.2	737.4	0.0	82.3	82.3
	1.4	385.0	393.1	204.3	597.4	0.3	195.4	195.7
	0.6	26.2	28.7	49.7	78.4	0.2	117.1	117.3
	2.0	411.2	421.8	254.0	675.8	0.2	117.1	117.3
	1.4	393.7	402.2	176.9	579.1	0.3	318.8	319.1
	0.6	53.8	56.7	46.0	102.7	5.0	211.4	216.4
	2.0	447.5	458.9	222.9	681.8	5.0	211.4	216.4
	1.3	465.9	474.9	150.6	625.5	42.8	279.4	322.2
	0.5	72.0	74.8	39.5	114.3	43.7	164.2	207.9
	1.8	537.9	549.7	190.1	739.8	43.7	164.2	207.9
	1.4	460.8	470.5	267.2	737.7	45.6	232.0	277.6
	0.6	34.6	37.3	62.4	99.7	45.6	132.3	177.9
	2.0	495.4	507.8	329.6	837.4	45.6	132.3	177.9
	1.4	352.6	361.2	211.5	572.7	43.8	140.7	184.5
	0.6	(29.9)	(27.4)	81.6	54.2	41.5	88.8	130.3
	2.0	322.7	333.8	293.1	626.9	41.5	88.8	130.3
	1.4	413.5	421.7	204.9	626.6	38.3	341.2	379.5
	1.6	2.5	6.1	54.8	60.9	41.8	276.8	318.6
	3.0	416.0	427.8	259.7	687.5	41.8	276.8	318.6
	0.9	453.5	460.4	164.2	624.6	54.0	475.1	529.1
	0.9	41.3	44.1	45.9	90.0	171.5	267.6	439.1
	1.8	494.8	504.5	210.1	714.6	171.5	267.6	439.1

Continued--

Appendix table 5--Sorghum: Marketing year supply and disappearance, specifi

Year beginning September 1	Supply				D	
	Begin-ning stocks	Produc-tion	Imports	Total	Food, alcohol, and industrial	Se
						Millio
1983/84						
Sept.-May	439.1	487.5	0.0	926.6	5.7	1.
June-Aug.	368.9	0.0	0.1	369.0	2.0	1.
Mkt. year	439.1	487.5	0.1	926.7	7.7	2.
1984/85						
Sept.-May	287.4	866.2	0.1	1,153.7	12.4	1.
June-Aug.	360.8	0.0	0.0	360.8	2.9	0.
Mkt. year	287.4	866.2	0.1	1,153.7	15.3	2.
1985/86						
Sept.-May	300.2	1,120.3	0.0	1,420.5	22.1	1.
June-Aug.	630.0	0.0	0.0	630.0	3.9	0.
Mkt. year	300.2	1,120.3	0.0	1,420.5	26.0	1.
1986/87						
Sept.-May	551.0	938.9	0.0	1,489.9	8.2	1.
June-Aug.	835.0	0.0	0.0	835.0	2.2	0.
Mkt. year	551.0	938.9	0.0	1,489.9	10.4	1.
1987/88						
Sept.-May	743.3	730.8	0.0	1,474.1	14.2	0
June-Aug.	807.8	0.0	0.0	807.8	9.3	0
Mkt. year	743.3	730.8	0.0	1,474.1	23.5	1
1988/89						
Sept.-May	662.7	576.7	0.0	1,239.4	17.0	0
June-Aug.	559.0	0.0	0.0	559.0	3.5	0
Mkt. year	662.7	576.7	0.0	1,239.4	20.5	1
1989/90						
Sept.-May	439.5	617.9	0.0	1,057.4	13.5	1
June-Aug.						
Mkt. year 2/	439.5	617.9	0.0	1,057.4	13.5	1

1/ Includes quantity under loan and farmer-owned reserve. 2/ Projected.

ecified periods, 1975/76-1989/90--Continued

Disappearance					Ending stocks		
Domestic use			Exports	Total disappearance	Govt. owned	Privately owned 1/	Total
Seed	Feed and residual	Total					
llion bushels							
1.1	356.5	363.3	194.4	557.7	78.0	290.9	368.9
1.2	28.2	31.4	50.2	81.6	102.8	184.6	287.4
2.3	384.7	394.7	244.6	639.3	102.8	184.6	287.4
1.5	542.2	556.1	236.8	792.9	111.1	249.7	360.8
0.5	(2.9)	0.5	60.1	60.6	112.1	188.1	300.2
2.0	539.3	556.6	296.9	853.5	112.1	188.1	300.2
1.2	626.9	650.2	140.3	790.5	181.4	448.6	630.0
0.5	36.9	41.3	37.7	79.0	207.2	343.8	551.0
1.7	663.8	691.5	178.0	869.5	207.2	343.8	551.0
1.0	490.9	500.1	154.8	654.9	400.4	434.6	835.0
0.6	45.4	48.2	43.5	91.7	409.0	334.3	743.3
1.6	536.3	548.3	198.3	746.6	409.0	334.3	743.3
0.8	466.0	481.0	185.3	666.3	535.0	272.8	807.8
0.5	89.3	99.1	46.0	145.1	463.6	199.1	662.7
1.3	555.3	580.1	231.3	811.4	463.6	199.1	662.7
0.8	424.8	442.6	237.8	680.4	463.6	95.4	559.0
0.7	43.2	47.4	72.1	119.5	340.9	98.6	439.5
1.5	468.0	490.0	309.9	799.9	340.9	98.6	439.5
1.5	525.4	540.4	250.0	790.4	225.0	42.0	267.0
1.5	525.4	540.4	250.0	790.4	225.0	42.0	267.0

ted.

Appendix table 6--Barley: Marketing year supply and disappearance, speci

Year beginning June 1	Supply				Disappearance
	Beginning stocks	Production	Imports	Total	Food, alcohol, and industrial
					Mil
1975/76:					
June-Aug.	92.0	379.2	4.0	475.2	36.4
Sept.-Nov.	373.8	---	3.0	376.8	31.8
Dec.-Feb.	299.9	---	3.6	303.5	29.2
Mar.-May	220.9	---	2.0	222.9	33.1
Mkt. year	92.0	379.2	12.6	483.8	130.5
1976/77:					
June-Aug.	128.4	383.0	3.9	515.3	37.9
Sept.-Nov.	406.2	---	1.0	407.2	31.9
Dec.-Feb.	304.9	---	1.8	306.7	30.5
Mar.-May	220.0	---	1.9	221.9	36.6
Mkt. year	128.4	383.0	8.6	520.0	136.9
1977/78:					
June-Aug.	126.4	427.8	3.4	557.6	36.6
Sept.-Nov.	447.7	---	0.8	448.5	31.8
Dec.-Feb.	358.3	---	1.8	360.1	32.2
Mar.-May	275.4	---	0.5	275.9	38.0
Mkt. year	126.4	427.8	6.5	560.7	138.6
1978/79:					
June-Aug.	173.1	454.8	1.5	629.4	41.3
Sept.-Nov.	511.4	---	1.0	512.4	36.5
Dec.-Feb.	417.9	---	2.2	420.1	35.5
Mar.-May	331.9	---	2.1	334.0	40.3
Mkt. year	173.1	454.8	6.8	634.7	153.6
1979/80:					
June-Aug.	228.0	383.2	1.7	612.9	41.0
Sept.-Nov.	499.9	---	1.1	501.0	37.3
Dec.-Feb.	395.9	---	2.0	397.9	37.1
Mar.-May	301.2	---	2.3	303.5	42.4
Mkt. year	228.0	383.2	7.1	618.3	157.8
1980/81:					
June-Aug.	192.1	361.1	1.3	554.5	44.6
Sept.-Nov.	433.6	---	1.3	434.9	38.4
Dec.-Feb.	336.4	---	1.5	337.9	36.5
Mar.-May	238.1	---	1.8	239.9	42.9
Mkt. year	192.1	361.1	5.9	559.1	162.4

See footnotes at end of table.

specified periods, 1975/76-1989/90

Disappearance					Ending stocks		
Domestic use			Exports	Total disappearance	Govt. owned	Privately owned 1/	Total
Seed	Feed and residual	Total					
Million bushels							
0	61.3	97.7	3.7	101.4	0	373.8	373.8
1.1	39.0	71.9	5.0	76.9	0	299.9	299.9
1.3	46.0	76.5	6.1	82.6	0	220.9	220.9
13.3	40.1	86.5	8.0	94.5	0	128.4	128.4
15.7	186.4	332.6	22.8	355.4	0	128.4	128.4
0	63.1	101.0	8.1	109.1	0	406.2	406.2
1.3	42.4	75.6	26.7	102.3	0	304.9	304.9
1.5	36.0	68.0	18.7	86.7	0	220	220.0
15.4	32.3	84.3	11.2	95.5	0	126.4	126.4
18.2	173.8	328.9	64.7	393.6	0	126.4	126.4
0	48.2	84.8	25.1	109.9	0	447.7	447.7
1.2	37.7	70.7	19.5	90.2	0	358.3	358.3
1.3	45.7	79.2	5.5	84.7	0	275.4	275.4
14.3	45.2	97.5	5.3	102.8	0	173.1	173.1
16.8	176.8	332.2	55.4	387.6	0	173.1	173.1
0	62.5	103.8	14.2	118.0	0.8	510.6	511.4
1	48.7	86.2	8.3	94.5	1.2	416.7	417.9
1.1	50.7	87.3	0.9	88.2	2.1	329.8	331.9
11.5	52.9	104.7	1.3	106.0	2.5	225.5	228.0
13.6	214.8	382.0	24.7	406.7	2.5	225.5	228.0
0.0	64.6	105.6	7.4	113.0	2.8	497.1	499.9
1.0	47.2	85.5	19.6	105.1	3.0	392.9	395.9
1.1	47.6	85.8	10.9	96.7	3.2	298.0	301.2
11.8	42.3	96.5	14.9	111.4	3.2	188.9	192.1
13.9	201.7	373.4	52.8	426.2	3.2	188.9	192.1
0.0	58.4	103.0	17.9	120.9	3.4	430.2	433.6
1.1	40.2	79.7	18.8	98.5	3.4	333.0	336.4
1.3	35.3	73.1	26.7	99.8	3.4	234.7	238.1
13.5	33.9	90.3	12.3	102.6	3.4	133.9	137.3
15.9	167.8	346.1	75.7	421.8	3.4	133.9	137.3

Continued--

Appendix table 6--Barley: Marketing year supply and disappearance, specifi

Year beginning June 1	Supply				Dom	
	Beginning stocks	Production	Imports	Total	Food, alcohol, and industrial	Se
						Millio
1981/82:						
June-Aug.	137.3	473.5	1.1	611.9	43.1	
Sept.-Nov.	492.1	---	1.1	493.2	36.7	
Dec.-Feb.	366.4	---	2.5	368.9	36.6	
Mar.-May	263.1	---	2.1	265.2	41.5	13
Mkt. year	137.3	473.5	6.8	617.6	157.9	15
1982/83:						
June-Aug.	147.8	515.9	3.9	667.6	40.6	
Sept.-Nov.	538.5	---	1.3	539.8	36.0	
Dec.-Feb.	443.2	---	1.2	444.4	35.6	
Mar.-May	338.6	---	2.0	340.6	40.5	14
Mkt. year	147.8	515.9	8.4	672.1	152.7	17
1983/84:						
June-Aug.	216.7	508.3	2.3	727.3	42.5	
Sept.-Nov.	576.5	---	0.6	577.1	35.0	
Dec.-Feb.	422.0	---	1.0	423.0	34.6	
Mar.-May	308.2	---	1.1	309.3	40.0	1
Mkt. year	216.7	508.3	5.0	730.0	152.1	19
1984/85:						
June-Aug.	189.4	598.0	2.7	790.1	39.9	
Sept.-Nov.	639.0	---	0.9	639.9	34.6	
Dec.-Feb.	484.9	---	2.4	487.3	34.2	
Mar.-May	358.7	---	1.5	360.2	40.3	1
Mkt. year	189.4	598.0	7.5	794.9	149.0	2
1985/86:						
June-Aug.	247.4	590.2	0.7	838.3	39.1	
Sept.-Nov.	698.3	---	1.3	699.6	33.7	
Dec.-Feb.	572.1	---	2.5	574.6	33.7	
Mar.-May	464.7	---	1.7	466.4	40.7	1
Mkt. year	247.4	590.2	6.2	843.8	147.2	2
1986/87:						
June-Aug.	327.2	608.5	1.3	937.0	42.2	
Sept.-Nov.	786.8	---	1.0	787.8	36.5	
Dec.-Feb.	634.3	---	1.2	635.5	35.8	
Mar.-May	499.3	---	3.1	502.4	41.6	1
Mkt. year	327.2	608.5	6.6	942.3	156.1	1

See footnotes at end of table.

ecified periods, 1975/76-1989/90--Continued

Disappearance					Ending stocks		
--Domestic use----------							
Seed	Feed and residual	Total	Exports	Total disappearance	Govt. owned	Privately owned 1/	Total
illion bushels							
0.0	56.5	99.6	20.2	119.8	3.3	488.8	492.1
1.1	52.0	89.8	37.0	126.8	3.3	363.1	366.4
1.3	43.8	81.7	24.1	105.8	3.3	259.8	263.1
13.5	45.3	100.3	17.1	117.4	3.3	144.5	147.8
15.9	197.6	371.4	98.4	469.8	3.3	144.5	147.8
0.0	70.2	110.8	18.3	129.1	3.7	534.8	538.5
1.2	49.9	87.1	9.5	96.6	4.3	438.9	443.2
1.4	58.1	95.1	10.7	105.8	4.6	334.0	338.6
14.6	63.1	118.2	5.7	123.9	6.0	210.7	216.7
17.2	241.3	411.2	44.2	455.4	6.0	210.7	216.7
0.0	99.5	142.0	8.8	150.8	8.5	568.0	576.5
1.4	87.6	124.0	31.1	155.1	10.7	411.3	422.0
1.6	49.9	86.1	28.7	114.8	12.0	296.2	308.2
16.5	43.3	99.8	20.1	119.9	11.9	177.5	189.4
19.5	280.3	451.9	88.7	540.6	11.9	177.5	189.4
0.0	100.1	140.0	11.1	151.1	12.2	626.8	639.0
1.5	83.7	119.8	35.2	155.0	13.0	471.9	484.9
1.7	71.7	107.6	21.0	128.6	14.2	344.5	358.7
18.2	50.0	108.5	4.3	112.8	15.6	231.8	247.4
21.4	305.5	475.9	71.6	547.5	15.6	231.8	247.4
0.0	90.5	129.6	10.4	140.0	20.0	678.3	698.3
1.5	85.0	120.2	7.3	127.5	36.1	536.0	572.1
1.7	73.2	108.6	1.3	109.9	47.3	417.4	464.7
18.1	79.6	138.4	0.8	139.2	57.4	269.8	327.2
21.3	328.3	496.8	19.8	516.6	57.4	269.8	327.2
0.0	94.5	136.7	13.5	150.2	56.0	730.8	786.8
1.3	72.2	110.0	43.5	153.5	66.2	568.1	634.3
1.4	67.2	104.4	31.8	136.2	75.2	424.1	499.3
15.2	64.5	121.3	44.8	166.1	75.5	260.8	336.3
17.9	298.4	472.4	133.6	606.0	75.5	260.8	336.3

Continued--

Appendix table 6--Barley: Marketing year supply and disappearance, s

Year beginning June 1	Supply				
	Beginning stocks	Production	Imports	Total	Food, alcohol, and industrial
1987/88:					
June-Aug.	336.3	521.5	1.1	858.9	42.8
Sept.-Nov.	725.0	---	2.9	727.9	37.1
Dec.-Feb.	582.4	---	4.3	586.7	36.3
Mar.-May	458.5	---	3.0	461.5	42.1
Mkt. year	336.3	521.5	11.3	869.1	158.3
1988/89:					
June-Aug.	321.1	290	2.8	613.9	45.2
Sept.-Nov.	450.4	---	2.2	452.6	39.4
Dec.-Feb.	372.1	---	2.8	374.9	37.2
Mar.-May	280.6	---	2.7	283.3	42.9
Mkt. year 1/	321.1	290	10.5	621.6	164.7
1989/90:					
June-Aug.	196.4	403.4	3.6	603.4	46.7
Sept.-Nov.	416.9	---	2.0	418.9	40.1
Mkt. year 2/	196.4	403.4	10.0	609.8	165.0

--- = Not applicable.
1/ Preliminary. 2/ Projected.

Appendix table 7--Oats: Marketing year supply and disappearance, 197

Year beginning June 1	Supply				
	Beginning stocks	Production	Imports	Total	Food, alcohol, and industrial
1975/76	224.0	639.0	0.5	863.5	42.0
1976/77	204.8	540.4	1.4	746.6	42.4
1977/78	164.3	752.8	2.1	919.2	42.0
1978/79	313.1	581.7	0.6	895.4	41.0
1979/80	280.0	526.7	0.8	807.5	40.7
1980/81	236.4	458.8	1.1	696.3	41.0
1981/82	177.0	509.5	1.5	688.0	41.2
1982/83	151.9	592.6	3.5	748.0	41.7
1983/84	219.8	476.5	29.9	726.2	40.9
1984/85	180.9	473.7	33.6	688.2	41.0
1985/86	179.9	518.5	27.2	725.6	44.0
1986/87	183.7	385.0	32.4	601.1	45.0
1987/88	132.7	373.7	45.7	552.1	49.8
1988/89 3/	112.0	217.6	62.9	392.5	72.7
1989/90 4/	98.3	373.8	60.0	532.1	---1

1/ Quarterly supply and disappearance estimates discontinued becaus
2/ Includes quanity under loan and farmer-owned reserve. 3/ Prelimin

ce, specified periods, 1975/76-1989/90--Continued

Disappearance						Ending stocks		
Domestic use				Exports	Total disappearance	Govt. owned	Privately owned 1/	Total
d, and rial	Seed	Feed and residual	Total					
Million bushels								
.8	0.0	74.3	117.1	16.8	133.9	74.9	650.1	725.0
.1	1.1	64.8	103.0	42.5	145.5	79.5	502.9	582.4
.3	1.3	58.7	96.3	31.9	128.2	57.0	401.5	458.5
.1	13.3	56.4	111.8	28.6	140.4	50.1	271.0	321.1
.3	15.7	254.2	428.2	119.8	548.0	50.1	271.0	321.1
.2	0.0	92.5	137.7	25.8	163.5	35.9	414.5	450.4
.4	1.1	27.1	67.6	12.9	80.5	35.9	336.2	372.1
.2	1.2	40.6	79.0	15.3	94.3	34.1	246.5	280.6
.9	12.7	5.7	61.3	25.6	86.9	30.4	166.0	196.4
.7	15.0	165.9	345.6	79.6	425.2	30.4	166.0	196.4
.7	0.0	113.2	159.9	26.6	186.5	36.6	380.3	416.9
.1	1.1	11.8	53.0	12.7	65.7	36.3	316.9	353.2
.0	15.0	175.0	355.0	100.0	455.0	35.0	119.8	154.8

1975/76-1989/90 1/

Disappearance						Ending stocks		
Domestic use				Exports	Total disappearance	Govt. owned	Privately owned 1/	Total
d, and rial	Seed	Feed and residual	Total					
Million bushels								
.0	40.3	564.1	646.4	12.3	658.7	24.9	179.9	204.8
.4	43.7	487.9	574.0	8.3	582.3	0.0	164.3	164.3
.0	39.3	514.8	596.1	10.0	606.1	0.0	313.1	313.1
.0	33.8	530.3	605.1	10.3	615.4	2.7	277.3	280.0
.7	32.3	495.3	568.3	2.8	571.1	2.7	233.7	236.4
.0	33.0	436.5	510.5	8.8	519.3	2.3	174.7	177.0
.2	34.2	458.0	533.4	2.7	536.1	0.7	151.2	151.9
.7	43.3	442.4	527.4	0.8	528.2	0.7	219.1	219.8
.9	29.5	474.0	544.4	0.9	545.3	1.5	179.4	180.9
.0	31.2	435.6	507.8	0.5	508.3	1.4	178.5	179.9
.0	32.5	464.2	540.7	1.2	541.9	1.9	181.8	183.7
.0	38.0	384.5	467.5	0.9	468.4	3.5	129.2	132.7
.8	31.6	358.2	439.6	0.5	440.1	3.5	108.5	112.0
.7	27.1	193.8	293.6	0.6	294.2	2.0	96.3	98.3
---110---		301.6	411.6	0.5	412.1	1.0	119.0	120.0

ecause oats has been dropped from quarterly grain stocks survey.
liminary. 4/ Projected.

Appendix table 8--Average prices received by farmers, United States, by month, and loan rate, 1970-89 1/

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average 2/	Loan rate
						$/bu.								
Corn:														
1970	1.38	1.34	1.29	1.36	1.42	1.43	1.43	1.41	1.38	1.43	1.36	1.19	1.33	1.05
1971	1.11	1.00	0.97	1.08	1.09	1.09	1.10	1.13	1.15	1.13	1.14	1.15	1.08	1.05
1972	1.22	1.19	1.20	1.42	1.39	1.35	1.37	1.42	1.61	1.99	2.03	2.68	1.57	1.05
1973	2.15	2.17	2.18	2.39	2.59	2.76	2.68	2.41	2.45	2.57	2.91	3.37	2.55	1.05
1974	3.30	3.45	3.32	3.27	3.07	2.86	2.67	2.68	2.66	2.68	2.72	2.95	3.02	1.10
1975	2.76	2.62	2.33	2.37	2.44	2.48	2.50	2.46	2.61	2.74	2.82	2.64	2.54	1.10
1976	2.60	2.33	2.02	2.24	2.34	2.34	2.35	2.31	2.25	2.12	1.88	1.63	2.15	1.50
1977	1.60	1.67	1.88	1.97	2.00	2.03	2.15	2.24	2.29	2.28	2.16	2.01	2.02	2.00
1978	1.98	1.97	2.02	2.09	2.11	2.18	2.22	2.27	2.35	2.49	2.64	2.54	2.25	2.00
1979	2.51	2.41	2.27	2.38	2.45	2.39	2.40	2.36	2.42	2.49	2.73	2.92	2.48	2.10
1980	3.01	2.99	3.10	3.19	3.19	3.22	3.25	3.24	3.24	3.17	3.14	2.87	3.12	2.25
1981	2.55	2.45	2.34	2.39	2.54	2.44	2.46	2.55	2.60	2.57	2.50	2.30	2.47	2.40
1982	2.15	1.98	2.13	2.26	2.36	2.56	2.71	2.95	3.03	3.04	3.13	3.35	2.55	2.55
1983	3.32	3.15	3.17	3.15	3.15	3.11	3.21	3.32	3.34	3.36	3.30	3.12	3.21	2.65
1984	2.90	2.65	2.55	2.56	2.64	2.62	2.67	2.70	2.68	2.64	2.60	2.44	2.63	2.55
1985	2.29	2.11	2.21	2.29	2.33	2.32	2.29	2.30	2.39	2.32	2.00	1.73	2.23	2.55
1986	1.45	1.40	1.47	1.50	1.48	1.42	1.47	1.52	1.66	1.69	1.60	1.47	1.50	1.92
1987	1.49	1.55	1.61	1.72	1.77	1.83	1.86	1.88	1.94	2.41	2.72	2.65	1.94	1.82
1988	2.60	2.58	2.51	2.53	2.60	2.59	2.60	2.56	2.58	2.52	2.47	2.27	2.54	1.77
1989	2.27	2.22	2.24	2.27 3/	2.26									1.65
						$/cwt.								
Sorghum:														
1970	2.07	2.02	2.02	2.04	2.10	2.16	2.17	2.19	2.33	2.43	2.37	2.27	2.04	1.61
1971	2.01	1.76	1.78	1.86	1.89	1.86	1.87	1.87	1.88	1.90	1.98	2.05	1.86	1.73
1972	2.11	2.09	2.19	2.72	2.72	2.60	2.60	2.56	2.66	3.10	3.46	3.64	2.45	1.79
1973	3.87	3.65	3.66	3.83	4.03	4.38	4.25	3.78	3.59	3.59	4.15	5.07	3.82	1.79
1974	5.30	5.78	5.85	5.33	4.96	4.21	4.03	4.15	4.21	4.15	4.25	4.69	4.95	1.88
1975	4.56	4.43	4.05	4.00	4.06	4.09	4.14	4.14	4.14	4.29	4.53	4.03	4.23	1.88
1976	4.20	3.68	3.30	3.51	3.59	3.51	3.55	3.44	3.20	3.12	2.84	2.63	3.62	2.55
1977	2.52	2.80	3.03	3.05	3.15	3.20	3.39	3.62	3.66	3.64	3.50	3.37	3.25	3.39
1978	3.22	3.35	3.45	3.58	3.54	3.55	3.54	3.58	3.66	4.30	4.46	4.27	3.59	3.39
1979	4.24	3.90	3.99	3.90	4.05	3.98	4.05	3.96	4.04	4.49	4.95	5.12	4.19	3.57
1980	5.12	5.36	5.48	5.49	5.48	5.33	5.17	5.25	5.16	5.03	4.84	4.55	5.19	3.82
1981	4.07	3.90	3.87	3.95	4.09	4.08	4.00	4.10	4.35	4.17	3.96	3.95	4.01	4.07
1982	3.80	3.70	3.78	3.97	4.09	4.42	4.67	4.92	5.05	5.05	5.03	5.29	4.41	4.32
1983	5.26	5.01	4.98	4.93	4.92	4.74	4.85	5.00	5.08	4.94	4.64	4.58	4.89	4.50
1984	4.24	4.05	4.05	4.15	4.16	4.10	4.24	4.46	4.54	4.52	4.04	3.74	4.15	4.32
1985	3.27	3.30	3.47	3.76	3.69	3.55	3.67	3.80	3.99	3.43	3.06	2.66	3.45	4.32
1986	2.36	2.34	2.39	2.41	2.37	2.36	2.44	2.58	2.69	2.79	2.66	2.52	2.45	3.25
1987	2.43	2.48	2.69	2.72	2.75	2.88	2.92	2.94	2.91	4.13	4.56	4.41	3.04	3.11
1988	4.26	4.16	3.99	4.07	4.09	4.05	4.04	4.21	4.03	3.90	4.00	3.81	4.05	3.00
1989	3.80	3.61	3.68	3.53 3/	3.63									2.80

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average 2/	Loan rate
						$/bu.								
Oats:														
1970	0.61	0.58	0.57	0.61	0.61	0.63	0.65	0.67	0.68	0.66	0.63	0.66	0.62	0.63
1971	0.72	0.63	0.56	0.57	0.58	0.60	0.62	0.64	0.64	0.64	0.64	0.64	0.60	0.54
1972	0.67	0.66	0.62	0.64	0.67	0.70	0.81	0.81	0.78	0.77	0.77	0.80	0.72	0.54
1973	0.90	0.86	1.13	1.09	1.14	1.13	1.20	1.32	1.44	1.40	1.24	1.27	1.18	0.54
1974	1.30	1.37	1.55	1.57	1.68	1.70	1.70	1.62	1.58	1.46	1.51	1.54	1.53	0.54
1975	1.49	1.45	1.44	1.45	1.41	1.40	1.42	1.44	1.46	1.46	1.44	1.47	1.46	0.54
1976	1.64	1.64	1.48	1.49	1.46	1.45	1.51	1.58	1.63	1.64	1.64	1.52	1.56	0.72
1977	1.29	1.02	0.93	0.94	1.04	1.10	1.13	1.18	1.22	1.17	1.19	1.24	1.09	1.03
1978	1.16	1.08	1.06	1.06	1.08	1.15	1.19	1.22	1.25	1.27	1.29	1.29	1.20	1.03
1979	1.35	1.33	1.24	1.29	1.31	1.41	1.31	1.39	1.37	1.34	1.38	1.43	1.33	1.08
1980	1.48	1.50	1.53	1.63	1.65	1.84	1.92	1.98	2.01	2.08	2.05	2.05	1.72	1.16
1981	1.99	1.84	1.72	1.74	1.78	1.88	1.94	1.97	1.99	2.02	1.99	1.99	1.88	1.24
1982	1.88	1.57	1.39	1.35	1.32	1.40	1.44	1.46	1.48	1.49	1.54	1.54	1.49	1.31
1983	1.51	1.46	1.45	1.55	1.62	1.67	1.73	1.81	1.88	1.81	1.82	1.84	1.62	1.36
1984	1.80	1.68	1.62	1.60	1.69	1.64	1.72	1.74	1.69	1.68	1.68	1.60	1.67	1.31
1985	1.59	1.31	1.16	1.10	1.08	1.17	1.20	1.18	1.16	1.14	1.13	1.21	1.23	1.31
1986	1.10	0.90	0.86	0.99	1.10	1.32	1.44	1.46	1.47	1.45	1.50	1.57	1.21	0.99
1987	1.52	1.29	1.40	1.49	1.61	1.62	1.76	1.79	1.84	1.78	1.82	1.84	1.56	0.94
1988	2.63	2.86	2.54	2.57	2.56	2.41	2.47	2.52	2.46	2.41	2.24	2.13	2.61	0.90
1989	1.82	1.53	1.47	1.38	1.47	1.48	1.53 3/	1.40						0.85

See footnotes at end of table.

Continued--

Appendix table 8--Average prices received by farmers, United States, by month, and loan rate, 1970-89 1/--Continued

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar	Apr.	May	Average 2/	Loan rate
							$/bu.							
All barley:														
1970	0.94	0.90	0.85	0.91	0.93	0.96	1.02	1.02	1.03	1.02	1.03	1.12	0.97	0.83
1971	1.15	1.07	0.87	0.92	0.96	1.02	1.04	1.04	1.01	0.98	0.99	1.04	0.99	0.86
1972	1.09	1.04	0.96	1.07	1.17	1.21	1.32	1.42	1.34	1.31	1.31	1.39	1.21	0.86
1973	1.55	1.58	2.10	2.16	2.23	2.10	2.19	2.32	2.52	2.61	2.15	2.19	2.14	0.86
1974	2.25	2.35	2.78	2.86	3.11	3.41	3.30	3.17	2.89	2.55	2.72	2.75	2.81	0.90
1975	2.30	2.35	2.56	2.69	2.68	2.43	2.35	2.31	2.31	2.34	2.31	2.41	2.42	0.90
1976	2.60	2.51	2.35	2.33	2.22	2.11	2.08	2.19	2.19	2.25	2.22	2.12	2.25	1.22
1977	1.93	1.53	1.53	1.69	1.63	1.82	1.79	1.90	1.98	1.90	1.93	2.15	1.78	1.63
1978	2.04	1.83	1.86	1.85	1.90	1.93	1.90	1.95	1.87	1.89	1.96	2.07	1.92	1.63
1979	2.30	2.22	2.23	2.33	2.32	2.40	2.32	2.27	2.23	2.18	2.15	2.21	2.27	1.71
1980	2.36	2.52	2.59	2.65	2.81	2.90	2.97	3.09	3.05	3.04	3.04	3.00	2.79	1.83
1981	2.94	2.41	2.37	2.44	2.38	2.49	2.48	2.50	2.40	2.40	2.42	2.53	2.48	1.95
1982	2.39	2.16	2.20	2.17	1.98	2.06	2.19	2.16	2.00	2.09	2.22	2.36	2.18	2.08
1983	2.32	2.20	2.34	2.46	2.53	2.55	2.55	2.55	2.47	2.50	2.54	2.78	2.47	2.16
1984	2.61	2.54	2.26	2.25	2.29	2.25	2.19	2.24	2.21	2.18	2.16	2.22	2.29	2.08
1985	2.14	2.08	1.98	1.88	1.96	2.05	2.07	2.05	1.95	1.88	1.85	1.73	1.98	2.08
1986	1.57	1.67	1.51	1.45	1.58	1.69	1.62	1.60	1.63	1.69	1.69	1.76	1.61	1.56
1987	1.74	1.84	2.00	1.87	1.73	1.88	1.83	1.78	1.72	1.65	1.74	1.79	1.81	1.49
1988	2.45	2.97	2.96	2.94	2.86	2.96	2.73	2.74	2.67	2.74	2.73	2.64	2.79	1.44
1989	2.34	2.16	2.70	2.47	2.41	2.47	2.46 3/	2.36						1.34

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
							$/bu.					
Feed barley:												
1979	2.38	2.22	2.21	2.29	2.20	2.18	2.23	2.14	2.24	2.16	2.09	2.21
1980	2.38	2.43	2.46	2.56	2.70	2.75	2.96	3.09	2.98	2.99	2.90	3.01
1981	2.98	2.36	2.23	2.32	2.30	2.29	2.29	2.41	2.28	2.29	2.35	2.58
1982	2.52	2.23	1.98	1.91	1.87	1.94	1.98	2.07	1.99	2.08	2.26	2.43
1983	2.52	2.31	2.23	2.41	2.45	2.51	2.52	2.58	2.47	2.54	2.55	2.86
1984	2.72	2.60	2.10	2.13	2.19	2.19	2.20	2.22	2.27	2.19	2.16	2.30
1985	2.26	2.05	1.75	1.74	1.85	1.90	2.03	2.00	1.90	1.83	1.85	1.81
1986	1.61	1.44	1.21	1.33	1.49	1.62	1.59	1.56	1.61	1.69	1.71	1.84
1987	1.79	1.67	1.54	1.57	1.66	1.68	1.63	1.65	1.64	1.59	1.73	1.76
1988	2.07	2.34	2.37	2.39	2.34	2.30	2.27	2.28	2.29	2.35	2.32	2.27
1989	2.18	1.96	2.06	1.98	1.95	2.09	2.09	3/ 2.15				
Malting barley:												
1979	2.18	2.22	2.24	2.40	2.44	2.53	2.39	2.30	2.23	2.20	2.19	2.21
1980	2.34	2.61	2.72	2.81	2.97	3.04	2.99	3.08	3.11	3.10	3.14	2.99
1981	2.86	2.48	2.58	2.66	2.49	2.68	2.63	2.70	2.55	2.50	2.48	2.42
1982	2.26	2.10	2.38	2.58	2.22	2.26	2.39	2.32	2.00	2.09	2.13	2.18
1983	2.05	2.06	2.50	2.69	2.72	2.61	2.61	2.50	2.47	2.46	2.54	2.53
1984	2.52	2.48	2.50	2.52	2.52	2.39	2.18	2.29	2.11	2.17	2.17	2.10
1985	2.02	2.13	2.49	2.33	2.24	2.32	2.19	2.13	1.99	1.93	1.85	1.66
1986	1.52	2.07	2.23	1.85	1.83	1.78	1.65	1.70	1.69	1.69	1.65	1.66
1987	1.68	2.04	2.55	2.39	1.88	2.07	2.01	2.15	1.80	1.69	1.75	1.81
1988	2.80	3.26	3.38	3.47	3.41	3.34	3.27	3.32	3.22	3.22	3.16	3.04
1989	2.62	2.68	3.04	2.87	2.89	2.90	2.87	3/ 2.76				

1/ Prices do not include an allowance for loans outstanding and government purchases. 2/ U.S. season average prices based on monthly prices weighted by monthly marketings. 3/ Preliminary.

Source: Agricultural Prices, Agricultural Statistics Board, USDA.

Appendix table 9--Cash prices at principal markets, 1971-89

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
						$/bu.							
Corn, no. 2 yellow; Gulf Ports:													
1971	1.26	1.17	1.24	1.32	1.30	1.31	1.33	1.36	1.38	1.34	1.37	1.41	1.32
1972	1.50	1.45	1.50	1.70	2.01	2.06	2.03	1.95	2.20	2.58	2.78	3.11	2.07
1973	2.72	2.70	2.74	2.87	3.11	3.33	3.21	2.90	2.89	2.96	3.36	3.70	3.04
1974	3.59	3.86	3.68	3.69	3.34	3.06	3.05	3.03	2.90	3.02	3.03	3.29	3.30
1975	3.11	2.98	2.80	2.77	2.80	2.88	2.87	2.82	3.00	3.09	3.08	2.95	2.93
1976	2.92	2.70	2.51	2.63	2.83	2.81	2.73	2.68	2.56	2.40	2.16	1.95	2.57
1977	1.99	2.11	2.37	2.44	2.42	2.57	2.64	2.83	2.86	2.70	2.45	2.34	2.48
1978	2.31	2.44	2.54	2.49	2.66	2.72	2.77	2.83	2.85	3.05	3.33	3.02	2.75
1979	3.00	3.03	2.96	2.94	2.68	2.89	2.80	2.74	2.81	2.89	3.33	3.64	2.98
1980	3.58	3.57	3.72	3.73	3.78	3.64	3.61	3.69	3.58	3.46	3.51	3.23	3.59
1981	2.93	2.84	2.83	2.74	2.92	2.87	2.92	3.00	3.00	2.94	2.82	2.58	2.87
1982	2.55	2.33	2.62	2.68	2.74	2.98	3.18	3.39	3.40	3.43	3.57	3.88	3.06
1983	3.75	3.76	3.74	3.64	3.60	3.48	3.74	3.76	3.71	3.73	3.62	3.52	3.67
1984	3.31	3.08	2.98	2.90	3.03	3.04	3.05	3.05	2.96	2.95	2.92	2.67	3.00
1985	2.59	2.50	2.69	2.75	2.72	2.63	2.56	2.57	2.68	2.63	2.12	1.85	2.52
1986	1.68	1.66	1.83	1.81	1.73	1.70	1.83	1.89	2.06	2.06	1.95	1.81	1.83
1987	1.86	1.99	2.08	2.11	2.20	2.23	2.29	2.28	2.29	3.05	3.22	3.02	2.38
1988	3.08	3.07	2.89	2.99	3.01	2.99	3.02	2.93	2.99	2.87	2.73	2.57	2.93
1989	2.62	2.99	2.75	2.76	2.69								
Corn, no. 2 yellow, St. Louis:													
1971	1.06	1.01	1.07	1.17	1.16	1.17	1.17	1.21	1.24	1.22	1.25	1.26	1.17
1972	1.35	1.26	1.32	1.55	1.60	1.71	1.57	1.62	1.95	2.36	2.46	2.76	1.79
1973	2.29	2.28	2.40	2.63	2.84	3.03	2.91	2.64	2.63	2.82	3.29	3.52	2.77
1974	3.49	3.60	3.45	3.44	3.16	2.93	2.87	2.89	2.76	2.86	2.90	3.10	3.12
1975	2.90	2.62	2.53	2.56	2.60	2.66	2.69	2.66	2.81	2.90	2.91	2.78	2.72
1976	2.69	2.41	2.27	2.44	2.51	2.48	2.48	2.46	2.37	2.22	1.99	1.72	2.34
1977	1.66	1.75	2.14	2.23	2.30	2.24	2.38	2.46	2.49	2.45	2.27	2.12	2.21
1978	2.05	2.13	2.25	2.30	2.33	2.41	2.47	2.53	2.60	2.77	2.95	2.73	2.46
1979	2.68	2.59	2.51	2.66	2.50	2.64	2.54	2.53	2.60	2.66	3.01	3.31	2.69
1980	3.26	3.35	3.53	3.59	3.60	3.47	3.42	3.49	3.42	3.33	3.34	3.03	3.40
1981	2.61	2.53	2.59	2.54	2.65	2.61	2.66	2.78	2.78	2.75	2.68	2.42	2.63
1982	2.32	2.12	2.43	2.49	2.52	2.79	2.99	3.24	3.24	3.27	3.39	3.68	2.87
1983	3.60	3.50	3.53	3.45	3.41	3.31	3.55	3.61	3.58	3.57	3.43	3.33	3.49
1984	3.09	2.84	2.77	2.75	2.86	2.84	2.86	2.88	2.81	2.79	2.72	2.47	2.81
1985	2.38	2.27	2.50	2.59	2.55	2.50	2.42	2.46	2.56	2.52	2.01	1.67	2.37
1986	1.47	1.46	1.68	1.69	1.61	1.57	1.65	1.74	1.93	1.92	1.79	1.65	1.68
1987	1.65	1.78	1.91	1.97	2.05	2.07	2.09	2.10	2.13	2.77	2.96	2.81	2.19
1988	2.82	2.82	2.70	2.76	2.81	2.79	2.82	2.76	2.83	2.70	2.57	2.38	2.73
1989	2.38	2.44	2.48	2.44	2.45								
Corn, no. 2 yellow, Omaha:													
1971	1.15	1.14	1.15	1.24	1.25	1.23	1.23	1.25	1.27	1.23	1.24	1.21	1.22
1972	1.28	1.28	1.34	1.49	1.50	1.55	1.49	1.51	1.84	2.25	2.32	2.71	1.71
1973	2.37	2.34	2.40	2.49	2.71	2.95	2.76	2.49	2.51	2.68	3.19	3.55	2.70
1974	3.46	3.63	3.46	3.36	3.07	2.79	2.75	2.85	2.81	2.84	2.92	3.12	3.09
1975	2.95	2.75	2.55	2.56	2.57	2.60	2.62	2.59	2.74	2.86	2.83	2.69	2.69
1976	2.59	2.36	2.17	2.30	2.38	2.38	2.35	2.29	2.21	2.10	1.90	1.66	2.22
1977	1.67	1.79	2.02	2.04	2.02	2.03	2.14	2.25	2.34	2.33	2.13	1.98	2.06
1978	1.95	2.05	2.04	2.09	2.12	2.13	2.17	2.26	2.40	2.59	2.68	2.45	2.24
1979	2.37	2.37	2.32	2.36	2.26	2.33	2.23	2.32	2.43	2.50	2.81	2.98	2.44
1980	3.01	3.16	3.34	3.30	3.29	3.18	3.17	3.24	3.24	3.19	3.15	2.79	3.17
1981	2.51	2.44	2.39	2.37	2.47	2.45	2.48	2.61	2.65	2.65	2.54	2.23	2.48
1982	2.23	2.12	2.35	2.37	2.42	2.62	2.82	3.09	3.10	3.11	3.18	3.39	2.73
1983	3.32	3.23	3.24	3.17	3.11	3.03	3.25	3.33	3.35	3.37	3.22	3.11	3.23
1984	2.94	2.71	2.61	2.55	2.60	2.61	2.68	2.73	2.68	2.70	2.61	2.39	2.65
1985	2.35	2.26	2.28	2.36	2.33	2.31	2.31	2.34	2.43	2.42	2.01	1.61	2.25
1986	1.41	1.40	1.55	1.54	1.44	1.39	1.47	1.57	1.76	1.77	1.59	1.47	1.53
1987	1.51	1.57	1.68	1.75	1.79	1.84	1.86	1.87	1.96	2.64	2.72	2.55	1.98
1988	2.57	2.61	2.47	2.54	2.57	2.54	2.58	2.38	2.56	2.48	2.36	2.22	2.49
1989	2.22	2.26	2.28	2.28	2.25								

See footnotes at end of table.

Continued--

Appendix table 9--Cash prices at principal markets, 1971-89--Continued

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
						$/bu.							
Corn, no. 2 yellow, Chicago:													
1971	1.16	1.10	1.07	1.22	1.21	1.21	1.22	1.26	1.28	1.25	1.29	1.29	1.21
1972	1.40	1.32	1.33	1.57	1.58	1.59	1.59	1.65	2.01	2.42	2.52	2.91	1.82
1973	2.47	2.37	2.50	2.68	2.90	3.13	2.99	2.69	2.70	2.93	3.35	3.63	2.86
1974	3.55	3.74	3.48	3.47	3.19	2.96	2.90	2.96	2.82	2.89	2.95	3.12	3.17
1975	2.99	2.74	2.58	2.59	2.62	2.70	2.68	2.68	2.84	2.96	2.96	2.84	2.77
1976	2.77	2.49	2.33	2.44	2.53	2.54	2.52	2.50	2.41	2.27	2.05	1.78	2.39
1977	1.80	1.84	2.14	2.19	2.19	2.21	2.36	2.51	2.57	2.51	2.28	2.17	2.23
1978	2.13	2.22	2.28	2.27	2.29	2.35	2.42	2.53	2.66	2.83	3.00	2.83	2.48
1979	2.78	2.73	2.59	2.69	2.54	2.65	2.60	2.61	2.70	2.70	3.08	3.36	2.75
1980	3.44	3.43	3.43	3.54	3.56	3.49	3.48	3.53	3.47	3.41	3.41	3.09	3.44
1981	2.72	2.61	2.60	2.52	2.63	2.63	2.67	2.69	2.73	2.72	2.61	2.36	2.62
1982	2.17	2.07	2.38	2.44	2.54	2.74	2.98	3.12	3.11	3.28	3.33	3.60	2.81
1983	3.52	3.47	3.51	3.38	3.30	3.29	3.52	3.61	3.61	3.62	3.45	3.23	3.46
1984	2.95	2.81	2.79	2.72	2.79	2.79	2.84	2.90	2.85	2.83	2.76	2.50	2.79
1985	2.31	2.26	2.46	2.50	2.51	2.49	2.45	2.46	2.55	2.52	1.98	1.68	2.35
1986	1.49	1.51	1.68	1.66	1.57	1.50	1.60	1.69	1.89	1.88	1.68	1.53	1.64
1987	1.62	1.73	1.86	1.89	1.95	2.01	2.03	2.03	2.09	2.74	2.93	2.79	2.14
1988	2.79	2.81	2.65	2.69	2.74	2.72	2.78	2.72	2.77	2.66	2.50	2.30	2.68
1989	2.32	2.36	2.37	2.34	2.39								
						$/cwt							
Grain sorghum no. 2 yellow, Gulf Ports:													
1971	2.19	2.18	2.29	2.43	2.41	2.42	2.43	2.44	2.34	2.26	2.36	2.47	2.35
1972	2.64	2.58	2.76	3.32	3.69	3.56	3.46	3.38	3.56	3.96	4.52	5.14	3.55
1973	4.78	4.96	4.84	4.96	5.25	5.50	5.15	4.68	4.35	4.25	5.26	5.80	4.98
1974	5.84	6.77	6.63	6.35	5.39	4.95	5.04	5.06	5.02	4.80	4.69	5.55	5.51
1975	5.36	5.24	4.94	4.91	4.92	4.99	5.01	4.89	4.89	4.97	5.13	4.60	4.99
1976	4.80	4.45	4.24	4.37	4.52	4.52	4.43	4.25	4.16	3.82	3.64	3.43	4.22
1977	3.49	3.68	4.08	4.08	4.00	4.08	4.34	4.59	4.62	4.40	4.11	3.98	4.12
1978	3.95	4.26	4.38	4.34	4.40	4.44	4.46	4.46	4.56	4.96	5.40	5.05	4.55
1979	5.11	5.27	5.28	5.36	5.10	5.39	5.20	5.19	5.29	5.42	6.03	6.49	5.43
1980	6.43	6.48	6.79	6.71	6.65	6.46	6.40	6.38	6.34	5.76	5.60	5.29	6.27
1981	5.00	4.91	5.10	5.08	5.27	5.14	5.11	5.21	5.30	5.01	4.66	4.54	5.03
1982	4.36	4.44	5.00	5.06	5.20	5.49	5.64	5.98	6.05	5.78	5.68	6.18	5.41
1983	6.15	5.99	6.01	5.94	5.87	5.70	5.93	5.88	5.98	5.84	5.05	4.86	5.77
1984	4.75	4.60	4.84	5.04	5.19	5.10	5.32	5.36	5.23	4.78	4.49	4.04	4.90
1985	3.70	3.97	4.34	4.52	4.45	4.30	4.28	4.50	4.80	3.90	3.37	2.71	4.07
1986	2.95	3.15	3.26	3.15	3.05	3.09	3.35	3.30	3.51	3.50	3.30	3.04	3.22
1987	3.13	3.35	3.55	3.50	3.65	3.80	3.86	3.70	3.73	5.00	5.33	4.93	3.96
1988	4.99	4.91	4.64	4.93	4.99	4.99	5.02	4.89	5.05	4.75	4.02	4.53	4.81
1989	4.67	4.61	4.69	4.70	4.62								
Sorghum, no. 2 yellow, Kansas City:													
1971	1.91	1.80	1.91	2.06	2.06	2.07	2.07	2.09	2.08	2.06	2.11	2.05	2.02
1972	2.21	2.17	2.42	2.88	3.06	2.88	2.86	2.83	3.09	3.61	3.93	4.72	3.06
1973	4.37	4.37	4.31	4.37	4.71	4.99	4.64	4.03	3.84	3.99	5.02	5.79	4.53
1974	5.64	6.32	6.10	5.70	4.95	4.55	4.48	4.64	4.60	4.53	4.82	5.13	5.12
1975	4.66	4.53	4.36	4.33	4.36	4.47	4.62	4.47	4.47	4.66	4.73	4.29	4.50
1976	4.27	3.88	3.60	3.77	3.91	3.85	3.75	3.62	3.53	3.28	3.15	2.73	3.61
1977	2.78	3.05	3.40	3.36	3.37	3.49	3.78	3.92	3.92	3.82	3.54	3.41	3.49
1978	3.43	3.61	3.67	3.64	3.71	3.73	3.77	3.81	3.92	4.41	4.89	4.44	3.92
1979	4.34	4.42	4.41	4.57	4.21	4.35	4.20	4.15	4.31	4.49	5.36	5.71	4.54
1980	5.61	5.65	5.91	5.82	5.79	5.52	5.46	5.49	5.38	5.23	5.29	4.58	5.48
1981	4.16	4.14	4.14	4.27	4.44	4.26	4.28	4.45	4.48	4.50	4.38	4.02	4.29
1982	4.06	3.85	4.25	4.37	4.37	4.54	5.08	5.30	5.37	5.37	5.32	5.69	4.80
1983	5.55	5.37	5.25	5.16	5.09	5.03	5.40	5.36	5.39	5.40	4.95	4.74	5.22
1984	4.46	4.25	4.28	4.32	4.48	4.33	4.58	4.76	4.74	4.74	4.50	4.06	4.46
1985	3.56	3.62	3.75	3.97	3.95	3.80	3.82	4.00	4.25	4.00	3.20	2.71	3.72
1986	2.47	2.60	2.70	2.62	2.50	2.57	2.80	2.85	3.10	3.20	2.80	2.55	2.73
1987	2.64	2.75	2.90	2.95	3.05	3.24	3.27	3.16	3.21	4.58	4.79	4.28	3.40
1988	4.27	4.17	4.00	4.23	4.24	4.26	4.32	4.17	4.29	4.15	3.96	3.92	4.17
1989	4.73	3.91	4.00	3.98	4.00								

See footnotes at end of table.

Continued--

Appendix table 9--Cash prices at principal markets, 1971-89--Continued

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
						$/cwt.							
Sorghum, no. 2 yellow, Texas High Plains:													
1971	2.42	1.99	1.99	2.08	2.12	2.08	2.08	2.11	2.13	2.14	2.18	2.21	2.13
1972	2.28	2.26	2.48	2.98	3.03	2.98	3.01	2.96	3.20	3.69	3.77	5.21	3.15
1973	4.50	4.44	4.40	4.43	4.75	5.22	4.89	4.42	4.22	4.08	4.91	5.80	4.67
1974	5.74	6.26	6.12	5.82	5.00	4.52	4.41	4.70	4.64	4.63	4.67	5.23	5.14
1975	5.03	4.56	4.32	4.32	4.29	4.38	4.47	4.48	4.49	4.63	5.01	4.40	4.53
1976	4.33	3.97	3.73	3.79	3.86	3.86	3.86	3.77	3.67	3.50	3.46	3.10	3.74
1977	3.13	3.38	3.58	3.63	3.62	3.67	4.04	4.28	4.25	4.27	4.12	3.93	3.82
1978	3.85	4.06	4.13	4.08	4.04	4.05	4.01	4.06	4.21	4.83	5.39	4.97	4.31
1979	4.92	4.83	4.76	4.75	4.49	4.56	4.46	4.48	4.78	4.99	5.71	5.89	4.88
1980	5.95	6.27	6.62	6.42	6.26	5.93	5.79	5.88	5.90	5.83	5.80	5.02	5.97
1981	4.65	4.70	4.71	4.63	4.77	4.78	4.75	4.91	5.26	5.28	5.24	4.80	4.87
1982	4.39	4.08	4.38	4.65	4.82	5.19	5.52	5.94	5.76	5.81	5.86	5.85	5.19
1983	5.77	5.56	5.49	5.43	5.35	5.14	5.33	5.68	5.67	5.77	5.72	5.46	5.53
1984	5.22	4.95	4.86	4.90	4.84	4.86	4.98	5.14	5.22	5.25	5.24	NQ	5.04
1985	4.19	4.38	4.30	4.49	4.47	4.36	4.33	4.48	4.77	4.84	3.93	3.36	4.33
1986	3.35	3.24	2.97	3.06	2.94	2.89	3.06	3.32	3.56	3.60	3.58	3.30	3.24
1987	3.19	3.27	3.27	3.39	3.40	3.53	3.56	3.54	3.55	4.84	5.25	4.96	3.81
1988	4.98	4.95	4.62	4.63	4.75	4.69	4.72	4.63	4.50	4.59	4.46	4.44	4.66
1989	4.39	4.61	4.69	4.03	4.04								

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average
						$/bu.							
Barley, no. 3 or better malting, 65% or better plump, Minneapolis:													
1971	1.30	1.25	1.10	1.11	1.17	1.17	1.17	1.20	1.19	1.19	1.19	1.20	1.19
1972	1.22	1.22	1.21	1.26	1.34	1.34	1.45	1.59	1.58	1.61	1.64	1.66	1.43
1973	1.74	1.82	2.45	2.64	2.62	2.64	2.64	2.76	3.27	3.57	2.98	2.94	2.67
1974	3.11	3.38	3.77	4.00	4.42	4.78	4.65	4.62	4.45	4.15	4.34	4.28	4.16
1975	3.97	3.83	3.65	3.93	3.83	3.56	3.35	3.24	3.21	3.22	3.17	3.22	3.52
1976	3.55	3.59	3.37	3.24	3.21	3.00	2.95	3.00	2.91	2.98	2.91	2.83	3.13
1977	2.38	2.02	1.92	2.15	2.25	2.36	2.32	2.26	2.33	2.32	2.44	2.51	2.27
1978	2.39	2.13	2.19	2.27	2.26	2.47	2.40	2.30	2.33	2.46	2.59	2.73	2.38
1979	2.80	2.82	2.67	3.10	3.18	3.06	2.93	2.87	2.81	2.69	2.73	2.82	2.87
1980	2.99	3.36	3.27	3.63	3.80	3.88	3.77	3.75	3.83	3.71	3.84	3.80	3.64
1981	3.34	2.95	3.15	3.05	3.02	3.07	2.92	3.00	3.14	2.99	2.98	3.05	3.06
1982	2.93	2.63	2.48	2.37	2.42	2.45	2.37	2.38	2.42	2.45	2.68	2.76	2.53
1983	2.60	2.54	2.76	2.90	2.96	2.95	2.77	2.85	2.76	2.91	3.04	3.06	2.84
1984	3.04	2.86	2.48	2.44	2.43	2.43	2.36	2.46	2.47	2.51	2.52	2.55	2.55
1985	2.46	2.25	2.03	2.15	2.10	2.27	2.29	2.28	2.20	2.34	2.40	2.07	2.24
1986	1.84	1.75	1.61	1.76	1.93	2.02	1.88	1.81	1.92	2.01	2.05	2.12	1.89
1987	2.07	1.93	1.73	1.98	2.08	2.05	2.01	2.02	2.15	2.08	2.11	2.24	2.04
1988	3.61	3.87	4.25	4.40	4.39	4.14	3.82	4.14	4.19	4.33	4.29	3.84	4.11
1989	3.02	3.33	3.57	3.42	3.48	3.18	3.19	3.20					
Barley, no. 2 feed, Minneapolis 1/, 2/:													
1971	1.08	1.00	0.95	0.99	1.04	1.04	1.04	1.07	1.07	1.05	1.06	1.08	1.04
1972	1.05	0.96	0.98	1.11	1.16	1.14	1.27	1.34	1.20	1.19	1.25	1.36	1.17
1973	1.51	1.67	2.12	2.12	2.02	1.80	2.12	2.34	2.51	2.32	1.74	2.10	2.03
1974	2.36	2.36	2.69	2.48	3.07	3.17	2.89	2.82	2.59	2.26	2.24	2.05	2.58
1975	1.67	2.04	2.77	3.00	2.83	2.42	2.23	2.11	2.26	2.38	2.39	2.50	2.38
1976	2.62	2.45	2.48	2.68	2.46	2.21	2.05	2.20	2.35	2.29	2.28	2.13	2.35
1977	1.76	1.63	1.50	1.58	1.66	1.65	1.65	1.65	1.65	1.66	1.91	1.90	1.68
1978	1.84	1.71	1.68	1.77	1.81	1.88	1.79	1.71	1.69	1.86	1.89	1.96	1.80
1979	2.16	2.39	2.15	2.22	2.34	2.11	2.15	2.09	2.04	2.06	2.12	2.09	2.16
1980	2.15	2.48	2.39	2.43	2.77	3.03	2.75	2.81	2.90	2.63	2.51	2.39	2.60
1981	2.09	2.26	2.35	2.21	2.26	2.31	2.06	2.20	2.27	2.16	2.16	2.24	2.21
1982	2.12	1.85	1.72	1.69	1.54	1.58	1.59	1.63	1.72	1.73	2.01	1.95	1.76
1983	1.96	1.95	2.42	2.61	2.60	2.53	2.39	2.55	2.56	2.65	2.74	2.77	2.48
1984	2.59	2.18	2.13	2.05	2.10	2.06	1.88	1.98	1.99	1.97	2.05	2.05	2.09
1985	1.90	1.66	1.46	1.40	1.41	1.49	1.60	1.57	NQ	NQ	NQ	1.31	1.53
1986	1.23	1.16	1.13	1.27	1.50	1.63	1.23	NQ	NQ	1.64	1.76	1.86	1.44
1987	1.73	1.59	1.60	1.76	1.78	1.82	1.74	1.72	1.77	1.88	1.94	1.98	1.78
1988	2.41	2.31	2.08	2.24	2.32	2.27	2.14	2.24	2.33	2.49	2.52	2.41	2.31
1989	2.12	2.22	2.17	2.14	2.16	2.15	2.23	2.28					

See footnotes at end of table.

Continued--

Appendix table 9--Cash prices at principal markets, 1971-89--Continued

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Average
						$/bu.							
Barley, no. 2 Western, Portland:													
1971	1.30	1.12	0.99	1.04	1.06	1.17	1.20	1.20	1.23	1.24	1.22	1.22	1.17
1972	1.16	1.22	1.34	1.41	1.52	1.58	1.66	1.91	1.83	1.79	1.73	1.84	1.58
1973	2.01	2.31	2.58	2.61	2.63	2.70	2.63	2.85	2.93	2.93	2.36	2.39	2.58
1974	2.51	2.79	3.14	3.23	3.41	3.68	3.56	3.18	2.82	2.47	2.75	2.68	3.02
1975	2.47	2.04	2.77	3.01	2.82	2.46	2.38	2.45	2.56	2.56	2.44	2.50	2.54
1976	2.65	2.70	2.55	2.61	2.49	2.28	2.28	2.50	2.63	2.34	2.36	2.41	2.48
1977	2.19	2.10	1.96	2.00	1.97	2.04	2.13	2.19	2.20	2.24	2.39	2.41	2.15
1978	2.41	2.24	2.22	2.02	1.94	1.97	2.05	2.08	1.98	2.04	2.09	2.14	2.10
1979	2.47	2.89	2.76	2.75	2.69	2.57	2.67	2.68	2.79	2.67	2.63	2.71	2.69
1980	2.78	3.03	2.88	2.93	3.34	3.56	3.63	3.68	3.71	3.58	3.48	3.50	3.34
1981	3.21	2.83	2.76	2.73	2.67	2.73	2.73	2.97	2.94	2.91	2.99	3.01	2.87
1982	2.82	2.54	2.56	2.46	2.22	2.49	2.40	2.45	2.44	2.49	2.61	2.73	2.52
1983	2.60	2.48	2.70	2.91	2.98	3.02	3.00	3.13	2.90	2.91	3.13	3.17	2.91
1984	3.05	2.59	2.57	2.53	2.58	2.62	2.65	2.58	2.56	2.49	2.46	2.44	2.59
1985	2.37	2.26	2.13	2.06	2.17	2.31	2.47	2.37	2.16	2.15	2.17	2.16	2.23
1986	1.98	1.79	1.75	1.73	1.97	2.01	1.86	2.00	2.12	2.09	2.11	2.17	1.97
1987	2.04	1.96	2.04	2.04	2.11	2.13	2.16	2.15	2.14	2.10	2.07	2.14	2.09
1988	2.67	2.80	2.72	2.66	2.65	2.77	2.75	2.75	2.71	2.82	2.84	2.79	2.74
1989	2.50	2.62	2.53	2.51	2.49	2.66	2.75	2.83					
Oats, no. 2 Heavy White, Toledo:													
1971	0.85	0.75	0.71	0.72	0.76	0.81	0.83	0.81	0.82	0.80	0.77	0.81	0.79
1972	0.82	0.82	0.86	0.88	0.89	0.88	1.09	1.00	1.01	0.92	0.98	1.02	0.93
1973	1.01	1.04	1.23	1.27	1.31	1.32	1.49	1.63	1.75	1.67	1.48	1.46	1.39
1974	1.50	1.59	1.74	1.72	1.85	1.88	1.88	1.75	1.72	1.60	1.67	1.64	1.71
1975	1.61	1.52	1.47	1.41	1.35	1.48	1.49	1.53	1.58	1.56	1.52	1.54	1.50
1976	1.73	1.58	1.51	1.54	1.57	1.65	1.77	1.83	1.91	1.85	1.80	1.81	1.71
1977	1.61	1.33	1.19	1.15	1.17	1.40	1.53	1.53	1.50	1.43	1.47	1.51	1.40
1978	1.49	1.29	1.27	1.24	1.29	1.39	1.39	1.42	1.44	1.39	1.38	1.45	1.37
1979	1.59	1.60	1.47	1.44	1.45	1.56	1.64	1.64	1.64	1.65	1.70	1.80	1.60
1980	1.89	1.79	1.78	1.85	2.00	2.22	2.39	2.51	2.49	2.39	2.36	2.39	2.17
1981	2.40	2.03	1.98	1.97	2.14	2.31	2.25	2.32	2.37	2.35	2.31	2.33	2.23
1982	2.17	1.61	1.39	1.34	1.37	1.49	1.58	1.58	1.54	1.52	1.52	1.53	1.55
1983	1.56	1.54	1.77	1.98	2.12	2.21	2.24	2.25	2.07	2.12	2.16	2.08	2.01
1984	2.06	2.06	2.00	1.95	1.92	1.96	1.94	1.96	1.96	1.88	1.75	1.60	1.92
1985	1.54	1.33	1.04	0.96	0.91	1.01	1.09	1.08	1.10	1.08	0.95	0.92	1.08
1986	0.81	0.82	0.83	0.81	0.93	1.23	1.43	1.52	1.55	1.34	1.44	1.69	1.20
1987	1.56	1.24	1.55	1.62	1.62	1.77	1.83	1.83	1.87	1.77	1.73	1.73	1.68
1988	2.71	2.79	2.66	2.55	2.41	2.04	2.08	2.25	2.10	1.96	1.83	1.79	2.26
1989	1.53	1.39	1.30	1.30	1.34	1.38	1.46	1.40					
Oats, no. 2 Heavy White, Minneapolis:													
1971	0.70	0.63	0.61	0.64	0.64	0.66	0.68	0.69	0.69	0.66	0.67	0.70	0.66
1972	0.70	0.69	0.70	0.71	0.76	0.81	0.91	0.88	0.84	0.84	0.86	0.91	0.80
1973	0.93	0.93	1.28	1.32	1.26	1.25	1.32	1.55	1.66	1.52	1.26	1.35	1.30
1974	1.43	1.63	1.68	1.71	1.87	1.80	1.74	1.64	1.64	1.49	1.72	1.78	1.68
1975	1.59	1.59	1.70	1.68	1.64	1.69	1.65	1.67	1.66	1.64	1.67	1.72	1.66
1976	1.93	1.84	1.67	1.67	1.66	1.62	1.67	1.78	1.80	1.76	1.81	1.68	1.74
1977	1.38	1.15	1.02	1.11	1.17	1.34	1.32	1.32	1.32	1.33	1.40	1.43	1.27
1978	1.36	1.24	1.28	1.36	1.39	1.47	1.40	1.47	1.54	1.60	1.48	1.55	1.43
1979	1.68	1.60	1.47	1.55	1.65	1.67	1.59	1.52	1.50	1.48	1.52	1.62	1.57
1980	1.67	1.80	1.70	1.86	1.96	2.15	2.16	2.20	2.25	2.23	2.21	2.23	2.04
1981	2.18	2.02	1.99	2.02	2.09	2.28	2.10	2.23	2.26	2.16	2.21	2.16	2.14
1982	2.12	1.87	1.53	1.51	1.51	1.67	1.67	1.67	1.63	1.63	1.73	1.71	1.69
1983	1.67	1.60	1.79	1.94	2.00	1.97	1.94	1.98	1.82	1.88	1.89	1.96	1.87
1984	1.92	1.84	1.77	1.79	1.84	1.92	1.87	1.81	1.82	1.79	1.73	1.65	1.81
1985	1.59	1.44	1.23	1.24	1.19	1.32	1.39	1.37	1.30	1.27	1.16	1.22	1.31
1986	1.18	1.05	1.12	1.29	1.39	1.72	1.66	1.64	1.56	1.46	1.59	1.83	1.46
1987	1.64	1.61	1.77	1.85	1.97	2.05	2.02	2.10	2.06	1.93	1.94	2.12	1.92
1988	3.26	3.25	3.09	3.07	2.99	2.71	2.74	2.87	2.59	2.49	2.30	2.22	2.80
1989	2.03	1.72	1.53	1.58	1.56	1.68	1.70	1.56					

NQ = No quotes. 1/ Prior to June 1977 reported as barley, no. 3 or better. 2/ Reporting point changed from Minneapolis #2 feed to Duluth #2 feed beginning March 1987.

Source: Grain and Feed Market News, Agricultural Marketing Service, USDA.

Appendix table 10--Feed-price ratios for livestock, poultry, and milk, by months, 1971-89

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
Hog/corn, U.S. basis 1/:													
1971	16.1	19.5	19.3	18.2	20.9	23.5	21.2	19.9	21.7	22.7	24.1	24.3	21.0
1972	23.0	23.0	22.3	20.8	22.3	25.4	27.9	24.7	21.9	18.7	20.3	21.0	22.6
1973	20.4	18.8	18.6	16.0	15.5	14.2	13.1	12.7	10.7	9.4	11.8	10.7	14.3
1974	10.2	10.8	11.1	11.7	12.4	13.5	14.5	14.7	17.0	17.7	19.8	19.0	14.4
1975	21.2	22.3	21.1	20.1	19.5	19.4	18.2	19.1	18.2	18.0	16.9	16.1	19.2
1976	15.3	14.1	15.4	16.3	16.3	16.8	15.8	15.6	18.1	19.8	23.8	26.3	17.8
1977	25.2	23.9	20.1	21.3	22.0	23.3	21.6	20.1	20.9	20.9	21.0	23.6	22.0
1978	24.2	25.8	23.4	23.0	24.0	24.1	21.8	19.4	18.4	15.9	14.4	14.3	20.7
1979	14.8	14.0	15.2	15.5	14.8	15.4	13.9	11.9	11.8	13.3	15.1	15.8	14.3
1980	15.3	15.8	14.7	13.7	12.8	12.8	11.9	12.0	12.6	15.0	15.7	17.1	14.1
1981	19.1	18.4	17.7	16.3	17.1	19.8	19.8	20.1	21.8	22.4	23.1	26.6	20.2
1982	28.5	28.2	24.6	23.7	23.4	21.9	18.6	15.9	15.1	14.4	13.9	13.9	20.2
1983	13.3	12.8	11.8	14.0	15.4	14.6	14.3	14.3	14.1	14.6	15.8	16.2	14.3
1984	16.0	16.5	18.4	19.0	18.2	18.4	16.3	15.3	15.4	16.9	17.6	17.4	17.1
1985	17.3	20.4	19.5	19.8	19.0	18.4	17.6	17.3	19.2	22.7	29.5	35.9	21.4
1986	40.2	37.9	35.9	33.7	31.9	33.9	32.2	33.4	32.8	35.0	37.3	39.9	35.3
1987	36.4	31.5	25.2	23.4	24.3	25.0	22.7	22.3	23.9	19.5	16.2	16.9	23.9
1988	15.7	15.0	14.4	15.7	15.7	15.7	15.2	14.4	16.1	17.9	18.6	20.2	16.2
1989	19.1	20.9	20.1	21.2 2/	20.8								
Beef-steer/corn, Omaha 3/:													
1971	28.3	28.3	29.0	27.6	28.5	29.5	28.6	27.6	28.1	30.8	31.0	29.5	28.9
1972	27.1	27.3	25.1	24.7	27.1	28.1	30.6	29.8	24.9	20.8	20.5	19.5	25.5
1973	19.0	17.9	16.7	15.8	17.4	15.7	15.5	16.7	16.1	14.2	13.7	13.1	16.0
1974	12.0	10.9	10.9	11.1	11.8	12.5	13.1	15.0	17.6	18.2	17.2	15.0	13.8
1975	16.6	17.4	17.7	17.6	16.0	14.9	13.8	16.6	14.8	14.2	13.4	13.8	15.6
1976	14.3	16.1	18.0	17.4	16.1	16.0	15.9	17.5	19.0	19.2	21.5	24.2	17.9
1977	24.2	23.6	20.7	21.1	21.6	22.2	22.7	23.3	24.5	23.8	25.6	26.5	23.3
1978	27.8	26.8	26.4	26.6	28.5	30.5	32.7	33.2	30.8	26.5	25.0	25.6	28.4
1979	28.6	27.8	28.9	29.1	29.4	29.0	30.0	27.2	26.6	26.6	25.1	24.3	27.7
1980	23.1	21.3	19.5	19.5	19.1	19.3	19.4	20.0	20.6	21.4	21.5	23.8	20.7
1981	26.0	25.2	25.0	25.0	24.6	25.9	26.5	26.5	27.2	26.5	26.1	29.2	26.1
1982	27.5	27.7	25.1	25.2	24.5	23.4	22.7	21.9	21.8	21.2	19.6	18.1	23.2
1983	17.8	18.4	18.3	19.8	21.6	22.1	21.1	20.4	19.7	19.1	20.4	20.7	20.0
1984	21.3	22.4	24.6	25.6	24.8	24.1	22.2	21.5	21.5	21.0	20.4	21.7	22.6
1985	21.8	25.7	27.8	26.7	25.6	24.4	24.0	22.9	23.0	22.3	28.9	36.7	25.8
1986	42.1	42.7	39.7	38.8	40.8	43.9	41.9	42.2	40.2	38.9	41.4	43.9	41.4
1987	42.1	41.4	38.4	36.7	36.4	37.4	38.2	39.4	38.6	29.5	24.4	26.1	35.7
1988	26.4	26.4	28.4	27.9	28.1	28.7	29.4	30.2	29.3	29.1	29.6	32.1	28.8
1989	31.0	30.8	31.7	32.9 2/	34.2								
Milk/feed, U.S. basis 4/:													
1971	1.76	1.84	1.88	1.85	1.81	1.81	1.78	1.72	1.69	1.66	1.68	1.72	1.77
1972	1.75	1.77	1.75	1.64	1.58	1.58	1.52	1.51	1.40	1.26	1.34	1.27	1.53
1973	1.51	1.57	1.62	1.57	1.51	1.51	1.49	1.50	1.45	1.37	1.30	1.16	1.46
1974	1.22	1.21	1.23	1.20	1.30	1.30	1.33	1.31	1.30	1.30	1.34	1.36	1.28
1975	1.48	1.56	1.66	1.70	1.49	1.44	1.43	1.39	1.35	1.28	1.30	1.34	1.45
1976	1.34	1.37	1.38	1.34	1.31	1.26	1.28	1.28	1.23	1.26	1.35	1.46	1.32
1977	1.56	1.62	1.58	1.51	1.50	1.52	1.51	1.47	1.49	1.43	1.45	1.54	1.52
1978	1.59	1.64	1.62	1.63	1.62	1.59	1.58	1.56	1.53	1.51	1.43	1.51	1.57
1979	1.54	1.55	1.59	1.54	1.54	1.56	1.56	1.55	1.53	1.50	1.48	1.42	1.53
1980	1.40	1.43	1.40	1.39	1.39	1.39	1.41	1.39	1.35	1.36	1.40	1.43	1.40
1981	1.48	1.53	1.56	1.54	1.55	1.53	1.53	1.51	1.46	1.47	1.47	1.50	1.51
1982	1.57	1.61	1.62	1.60	1.59	1.56	1.55	1.49	1.45	1.43	1.45	1.41	1.53
1983	1.36	1.39	1.36	1.34	1.33	1.33	1.34	1.32	1.32	1.32	1.35	1.40	1.35
1984	1.48	1.56	1.62	1.59	1.57	1.57	1.55	1.51	1.47	1.45	1.44	1.47	1.52
1985	1.51	1.56	1.55	1.53	1.48	1.50	1.48	1.48	1.46	1.45	1.51	1.55	1.51
1986	1.61	1.75	1.77	1.77	1.73	1.69	1.63	1.61	1.57	1.57	1.56	1.58	1.65
1987	1.64	1.65	1.65	1.63	1.51	1.47	1.43	1.40	1.37	1.36	1.15	1.19	1.45
1988	1.25	1.32	1.36	1.37	1.37	1.34	1.30	1.28	1.27	1.28	1.37	1.43	1.33
1989	1.52	1.62	1.70	1.77 2/	1.73								

See footnotes at end of table.

Continued--

Appendix table 10--Feed-price ratios for livestock, poultry, and milk, by months, 1971-89--Continued

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
Egg/feed, U.S. basis 5/:													
1971	7.1	6.9	7.2	8.2	7.1	7.0	7.6	6.5	6.4	6.4	7.0	6.9	7.0
1972	7.7	6.9	8.0	8.7	9.0	7.3	7.7	7.9	6.9	6.4	7.1	8.3	7.7
1973	8.6	8.2	8.6	8.5	8.8	8.4	7.5	7.0	6.2	5.8	6.2	5.7	7.5
1974	6.7	6.5	6.6	7.2	7.2	7.2	7.6	6.5	6.5	6.3	6.4	6.8	6.8
1975	7.5	7.1	8.1	9.0	8.6	8.2	7.4	7.3	7.5	6.8	6.8	7.6	7.7
1976	7.7	7.8	8.7	9.1	8.5	8.1	7.3	6.8	5.9	5.8	6.7	7.2	7.5
1977	7.6	7.1	7.3	7.4	6.7	7.5	7.4	6.7	6.3	5.6	6.4	7.0	6.9
1978	7.3	7.0	7.5	8.0	7.8	7.7	8.0	7.4	6.9	6.7	6.1	6.1	7.2
1979	6.4	6.1	6.8	7.3	6.6	6.0	6.4	6.0	5.4	5.6	5.7	6.0	6.2
1980	6.2	5.7	6.0	6.6	5.9	5.7	5.6	5.9	5.2	5.2	5.5	5.8	5.8
1981	6.4	6.5	7.2	6.7	6.6	6.8	7.1	6.6	5.6	5.3	5.7	5.4	6.3
1982	6.0	6.3	6.3	6.0	5.7	5.8	6.1	5.8	6.0	5.8	5.7	6.1	6.0
1983	6.00	6.20	6.90	7.70	8.80	8.50	7.40	8.50	6.50	5.80	5.80	5.80	6.99
1984	5.90	5.70	6.50	6.30	5.50	5.60	6.30	5.70	5.50	5.90	5.90	6.50	5.94
1985	7.10	7.30	7.50	7.40	7.20	6.90	7.60	6.40	6.40	5.70	6.90	7.30	6.98
1986	7.30	7.00	8.00	7.80	7.30	7.10	6.60	6.60	5.90	6.00	5.70	5.60	6.74
1987	6.50	6.00	6.40	5.70	5.60	5.30	5.60	5.20	5.00	5.30	4.90	4.90	5.53
1988	5.40	5.30	5.40	5.40	5.90	5.80	7.50	6.20	5.90	6.00	6.10	6.80	5.98
1989	6.80	7.10	7.90	8.30 2/	8.40								
Broiler/feed, U.S. basis 6/:													
1971	2.9	2.7	2.7	2.5	2.8	3.1	3.1	2.7	2.8	3.0	3.3	3.0	2.9
1972	3.2	2.9	2.7	2.6	2.9	3.1	3.5	3.9	3.3	2.9	3.4	4.0	3.2
1973	3.5	2.9	2.5	2.3	2.5	2.8	2.7	2.7	2.7	2.5	2.6	2.3	2.7
1974	2.6	2.5	2.6	2.4	2.7	2.9	2.9	2.8	3.1	3.4	3.7	2.6	2.9
1975	3.6	3.5	3.4	3.0	3.1	3.2	3.1	3.0	3.1	2.8	2.8	2.7	3.1
1976	2.5	2.4	2.3	2.3	2.5	2.7	2.7	2.6	2.6	2.7	3.0	2.9	2.6
1977	3.1	3.0	2.7	2.6	2.8	3.0	3.0	3.3	3.3	3.5	3.7	3.1	3.1
1978	3.1	2.9	2.8	2.9	3.1	3.3	3.1	3.0	3.2	2.9	2.5	2.3	2.9
1979	2.4	2.2	2.6	2.7	2.8	2.6	2.5	2.3	2.6	2.6	3.3	3.0	2.6
1980	2.9	2.8	2.5	2.5	2.6	2.6	2.6	2.3	2.4	2.6	2.6	2.5	2.6
1981	2.4	2.4	2.4	2.3	2.6	2.6	2.6	2.5	2.6	2.7	2.6	2.5	2.5
1982	2.6	2.5	2.5	2.5	2.6	2.7	2.4	2.3	2.4	2.6	2.8	2.8	2.6
1983	2.70	2.50	2.80	2.90	3.10	3.10	3.10	2.70	2.70	2.70	3.00	2.70	2.83
1984	2.80	2.60	2.80	2.70	2.90	2.90	2.80	2.80	3.10	3.20	3.10	3.10	2.90
1985	3.20	3.10	3.50	3.20	3.20	3.10	3.10	3.10	3.40	3.80	4.50	4.60	3.48
1986	3.80	4.40	3.90	3.40	3.60	3.50	3.30	3.20	3.30	3.00	2.90	3.30	3.47
1987	2.90	2.60	2.70	2.50	2.80	3.70	2.80	3.10	3.70	4.10	3.40	3.40	3.14
1988	3.20	2.80	2.70	2.80	2.90	2.90	3.20	3.20	3.80	3.60	3.30	3.10	3.13
1989	3.10	2.70	2.70	2.60 2/	2.70								
Turkey/feed, U.S. basis 7/:													
1971	4.7	4.7	4.8	5.1	4.9	4.8	4.7	4.6	4.5	4.5	4.4	4.4	4.7
1972	4.3	4.3	4.5	4.4	4.0	3.7	4.1	4.8	4.2	3.8	3.9	4.3	4.2
1973	4.9	5.0	5.3	4.8	4.0	3.8	3.8	3.4	3.2	3.1	2.9	2.9	3.9
1974	3.0	3.0	3.3	3.6	3.6	3.7	3.8	3.6	3.8	3.9	4.2	4.2	3.6
1975	4.2	4.3	4.5	4.4	4.0	3.9	4.0	3.9	3.9	3.5	3.3	3.4	3.9
1976	3.4	3.5	3.5	3.7	3.5	3.4	3.6	3.4	3.4	3.5	3.5	3.8	3.5
1977	4.0	4.3	4.5	4.5	4.3	4.2	4.3	4.2	4.3	4.4	4.5	4.8	4.4
1978	4.9	5.0	5.1	5.4	5.0	4.6	4.3	4.3	4.2	3.9	3.5	3.7	4.5
1979	3.7	3.9	4.5	4.3	3.8	3.6	3.5	3.4	3.1	3.1	3.5	3.5	3.7
1980	3.7	4.0	3.9	3.5	3.1	3.1	3.2	3.0	3.0	3.3	3.3	3.2	3.4
1981	3.1	2.8	3.1	2.9	3.0	3.0	3.0	3.0	3.0	3.2	3.4	3.5	3.1
1982	3.8	3.9	3.9	3.0	2.9	2.9	2.9	2.7	2.9	3.0	2.8	2.8	3.1
1983	3.00	3.00	3.10	3.50	3.60	3.20	3.30	3.30	3.30	3.30	3.60	3.80	3.33
1984	3.90	4.40	5.00	5.50	4.70	3.80	3.70	3.70	3.70	3.90	4.20	4.50	4.25
1985	5.00	5.50	5.50	5.50	3.40	3.40	3.50	3.50	3.80	4.30	4.50	4.60	4.38
1986	4.70	4.90	4.80	4.00	3.30	3.40	3.40	3.50	3.40	3.30	3.10	3.00	3.73
1987	2.90	2.80	3.10	3.60	2.90	2.60	2.50	2.70	2.80	3.00	3.00	3.10	2.92
1988	3.40	3.60	3.60	2.90	2.70	2.90	3.10	3.30	3.40	3.50	3.30	3.30	3.25
1989	3.00	3.20	3.40	3.30 2/	3.00								

1/ Bushels of corn equal in value to 100 pounds of hog, live weight. 2/ Preliminary. 3/ Based on price of choice beef-steers, 900-1100 pounds. 4/ Pounds of 16-percent mixed dairy feed equal in value to 1 pound whole milk. 5/ Pounds of laying feed equal in value to 1 dozen eggs. 6/ Pounds of broiler grower feed equal in value to 1 pound broiler, live weight. 7/ Pounds of turkey grower feed equal in value to 1 pound of turkey, live weight.

Source: Agricultural Prices, Agricultural Statistics Board, USDA.

Appendix table 11--Byproduct feeds: Average wholesale price a ton, bulk, specified markets, by months, 1970 to date

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
							$/ton						
Distiller's dried grains, Lawrenceburg, Indiana:													
1970	61.00	64.75	66.75	66.90	68.25	68.75	64.50	61.00	61.00	61.00	64.00	65.00	64.41
1971	66.60	61.00	59.00	58.00	59.00	58.70	58.00	60.10	62.25	64.25	64.00	65.10	61.33
1972	124.50	70.60	73.50	77.50	87.30	98.75	103.60	98.00	95.70	126.50	126.40	141.75	102.00
1973	154.10	119.20	117.50	126.25	129.70	123.90	106.25	94.00	90.50	92.75	98.00	120.00	114.35
1974	123.20	123.80	147.50	136.00	127.50	115.50	102.00	99.20	100.25	102.00	107.60	119.25	116.98
1975	125.50	121.75	110.40	97.60	107.75	114.50	107.60	102.50	101.50	110.20	123.00	126.40	112.39
1976	104.40	127.25	126.00	133.00	141.25	145.00	142.60	141.00	143.50	143.10	130.75	110.70	132.38
1977	113.60	112.25	117.10	123.00	124.60	124.00	123.75	123.00	124.00	125.60	124.50	118.60	121.17
1978	143.70	116.00	122.00	128.50	130.00	130.00	128.00	121.50	120.30	122.90	131.40	139.00	127.78
1979	160.00	153.00	147.50	145.00	143.60	134.70	124.00	121.10	122.60	126.00	132.00	144.50	137.83
1980	150.00	165.75	171.25	175.20	175.25	167.50	153.00	145.10	155.25	164.40	164.50	156.00	161.93
1981	150.00	151.25	153.75	148.00	146.25	147.60	139.40	136.50	142.00	147.00	153.00	145.25	146.67
1982	137.60	136.25	137.00	137.00	138.75	136.75	140.20	144.50	147.00	150.20	150.60	155.60	142.62
1983	167.50	175.00	183.20	189.75	190.00	185.00	173.50	165.50	168.00	165.75	156.60	147.75	172.30
1984	139.00	120.10	96.50	93.00	94.25	96.00	94.00	87.40	83.25	85.00	88.75	95.50	97.73
1985	96.50	99.70	105.25	110.80	115.00	113.75	109.50	112.40	111.90	109.75	102.10	N.Q.	107.88
1986	131.50	129.00	128.60	124.80	113.25	110.10	105.10	100.75	111.10	116.00	118.25	N.Q.	117.13
1987	118.00	118.25	122.50	128.40	138.75	139.75	136.00	129.00	126.50	131.80	159.00	N.Q.	131.63
1988	142.00	144.00	147.60	138.00	138.00	138.00	140.00	145.50	144.00	140.00	134.00	N.Q.	141.01
1989	141.75	140.00	131.00	121.00	122.00								
Brewers' dried grains, Milwaukee:													
1970	57.30	56.90	54.50	55.90	60.90	56.50	49.40	46.50	48.75	49.20	45.50	46.90	52.35
1971	46.90	47.50	48.00	50.50	56.10	51.90	49.50	51.25	51.70	49.40	46.00	50.80	49.96
1972	60.10	67.80	74.90	87.00	95.00	93.25	76.50	66.10	93.30	106.75	82.20	108.75	84.30
1973	98.50	112.60	117.60	122.25	122.40	103.00	81.25	88.90	81.50	63.40	81.60	119.40	99.36
1974	97.25	111.00	120.25	108.80	98.50	71.00	75.40	92.10	72.40	74.25	86.10	92.40	91.62
1975	86.80	99.00	93.25	89.00	104.40	92.60	95.60	84.90	88.20	96.60	100.90	105.90	94.76
1976	120.50	119.00	120.60	130.10	134.50	127.10	114.40	105.00	126.75	121.10	86.75	82.80	115.72
1977	85.00	88.60	98.10	108.25	101.20	89.50	93.00	88.00	82.40	87.00	75.75	74.20	89.25
1978	92.25	104.60	112.00	113.50	113.20	111.75	100.75	81.20	89.00	107.50	115.00	109.50	104.19
1979	116.00	124.80	115.10	116.70	120.80	109.00	96.25	93.00	105.25	103.75	107.00	115.00	110.22
1980	118.60	133.75	145.25	149.00	149.25	121.75	93.80	110.50	114.10	94.20	85.00	95.75	117.58
1981	99.60	109.25	117.50	99.40	103.25	97.50	85.00	95.75	98.50	89.00	88.00	87.40	97.52
1982	91.25	102.90	102.40	108.50	113.10	97.60	95.60	104.25	104.00	102.00	106.00	108.60	103.02
1983	122.25	127.75	128.10	136.00	141.00	136.25	123.50	106.00	98.40	102.40	88.00	80.25	115.82
1984	83.80	77.30	63.40	78.25	86.40	61.25	46.25	47.00	53.10	70.00	60.50	50.60	64.82
1985	70.60	74.50	71.25	93.00	106.25	71.90	58.10	81.50	78.75	67.10	61.25	61.25	74.62
1986	68.70	83.10	101.25	118.00	100.60	61.50	50.50	68.00	81.90	77.00	71.90	78.10	80.04
1987	85.00	91.90	105.60	113.00	118.75	100.60	85.50	89.40	94.40	114.00	144.00	136.50	106.55
1988	139.40	135.60	144.00	150.00	146.00	141.25	126.25	121.90	114.00	110.00	107.50	105.50	128.45
1989	99.40	103.00	116.25	130.00	128.50								
Corn gluten feed, 21% protein, Illinois Points:													
1970	50.00	52.50	54.00	57.00	59.00	50.25	50.00	48.50	48.00	48.00	45.00	41.60	50.32
1971	40.00	40.00	44.00	51.00	52.75	47.20	48.50	48.75	46.40	43.50	45.10	48.00	46.27
1972	49.75	54.40	58.80	68.50	79.80	79.25	77.25	66.00	72.00	78.25	79.00	97.00	71.67
1973	92.25	92.50	94.40	105.75	108.20	85.25	79.00	74.60	75.75	72.00	83.00	120.70	90.28
1974	91.00	100.00	103.75	92.80	90.25	80.50	77.00	88.40	80.00	81.60	83.90	91.50	88.39
1975	88.60	90.25	86.50	87.60	92.75	87.00	83.00	82.50	90.00	98.10	106.00	107.90	91.68
1976	114.00	115.10	108.00	117.50	125.25	122.00	110.60	114.80	117.50	108.80	89.00	80.40	110.25
1977	78.00	78.00	89.60	103.25	101.60	91.50	89.00	91.00	89.60	88.00	88.00	89.60	89.76
1978	96.25	107.60	113.50	115.40	118.60	122.00	121.60	120.50	117.90	122.50	131.00	130.00	118.07
1979	129.00	134.00	132.50	135.00	140.00	138.75	120.60	105.00	113.75	113.75	116.00	123.70	125.17
1980	130.00	126.25	131.25	138.00	140.00	120.00	114.50	121.25	122.40	111.00	101.75	107.25	121.97
1981	108.50	110.00	110.00	113.80	117.00	117.00	112.00	112.00	112.00	112.00	114.25	110.40	112.41
1982	115.00	109.50	111.20	120.00	125.00	117.50	112.80	110.00	111.75	114.00	120.00	127.00	116.15
1983	135.00	140.60	136.00	136.25	135.00	118.75	111.25	113.75	106.00	83.75	79.70	78.75	114.57
1984	69.40	76.00	80.10	80.60	79.80	73.90	61.60	59.70	63.25	68.50	74.10	78.00	72.08
1985	81.25	86.60	89.00	91.80	92.50	89.60	97.10	96.00	90.00	87.50	84.30	88.10	89.48
1986	97.80	105.50	109.75	99.20	97.90	98.10	99.60	98.40	96.90	93.80	91.25	92.40	98.38
1987	96.50	98.50	106.00	110.00	118.10	120.60	119.00	118.10	116.90	129.50	135.00	120.00	115.68
1988	119.40	119.40	123.10	125.00	127.10	120.90	118.90	120.40	112.50	108.00	107.00	106.10	117.32
1989	107.50	110.30	109.75	110.40	110.30								

See footnotes at end of table.

Continued--

Appendix table 11--Byproduct feeds: Average wholesale price a ton, bulk, specified markets, by months, 1970 to date--Continued

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
							$/ton						
Corn gluten meal, 60% protein, Illinois Points:													
1970	146.00	143.00	134.50	130.00	130.50	132.00	132.00	132.00	134.00	134.00	136.00	135.60	134.97
1971	131.00	126.00	121.60	118.75	121.25	125.20	130.50	137.00	142.00	146.50	149.25	150.80	133.32
1972	143.00	133.00	132.80	158.00	191.20	238.50	266.25	257.00	303.60	394.50	316.30	276.00	234.18
1973	221.25	210.70	200.75	234.25	246.80	267.75	267.50	254.00	204.90	180.00	214.50	263.40	230.48
1974	217.75	221.60	217.50	204.00	198.50	181.25	191.50	209.60	211.00	212.00	215.20	222.00	208.49
1975	229.20	237.75	238.25	241.00	248.00	254.00	250.80	208.10	185.50	209.30	257.40	270.20	235.79
1976	294.00	298.00	267.80	246.00	258.00	288.75	297.80	287.50	296.00	294.40	275.90	208.20	276.03
1977	182.00	182.60	215.30	243.75	250.00	250.00	248.75	245.50	220.00	213.75	201.75	216.00	222.45
1978	232.75	249.20	243.75	243.75	252.60	271.90	280.00	270.00	234.00	241.75	304.10	325.00	262.40
1979	316.90	275.00	260.60	263.10	269.00	246.25	222.50	206.00	211.90	220.00	233.00	268.10	249.36
1980	302.00	288.75	296.25	302.00	307.50	292.50	239.00	235.00	256.25	261.00	237.50	249.40	272.26
1981	260.00	245.25	244.40	260.50	275.00	271.25	243.00	225.00	225.00	228.00	237.50	229.50	245.37
1982	221.25	207.50	215.00	246.25	265.00	267.50	251.00	238.75	235.00	213.00	242.50	300.00	241.90
1983	326.25	308.75	283.00	275.00	284.00	258.75	245.00	256.25	271.00	266.25	236.75	218.75	269.15
1984	213.80	211.30	215.60	240.00	232.00	215.60	203.75	191.00	172.50	169.20	174.50	198.10	203.11
1985	211.25	208.70	208.75	219.50	219.40	208.10	198.75	192.90	210.60	216.90	211.50	206.25	209.38
1986	208.00	222.50	230.60	241.50	232.20	206.25	208.50	213.10	226.40	267.80	268.75	240.60	230.52
1987	259.50	278.75	305.60	313.50	309.40	283.75	287.00	275.60	278.75	355.50	380.00	310.00	303.11
1988	309.40	313.75	293.00	277.50	281.00	288.10	280.60	275.60	272.00	270.63	271.25	257.00	282.49
1989	284.20	312.50	298.75	280.00	281.00								
Meat and bone meal, Kansas City:													
1970	96.00	96.60	101.10	101.50	102.90	93.75	99.30	92.75	92.10	95.60	94.75	98.00	97.03
1971	98.25	96.40	94.00	95.00	100.00	104.40	118.90	121.25	117.50	118.75	127.40	131.30	110.26
1972	126.90	134.20	154.40	184.40	224.00	266.25	240.00	192.50	315.00	398.10	343.50	355.00	244.52
1973	201.90	174.00	220.00	328.75	306.00	221.25	160.00	139.00	143.75	138.10	175.00	196.25	200.33
1974	135.00	183.00	153.10	155.40	152.50	137.50	137.50	151.00	149.40	156.90	162.00	168.10	153.45
1975	154.00	150.50	141.90	150.50	158.10	158.10	159.00	163.10	205.00	253.50	232.50	184.00	175.85
1976	203.75	183.75	210.50	240.00	261.25	237.50	259.00	288.75	270.00	222.00	168.75	169.50	226.23
1977	193.75	183.75	210.00	186.40	189.00	186.25	241.90	210.60	204.50	210.00	204.40	202.50	201.92
1978	218.75	233.50	228.60	230.00	229.50	266.90	264.40	253.10	239.50	265.00	254.50	219.40	241.93
1979	238.10	236.50	233.75	231.90	229.50	248.20	253.75	208.50	183.75	194.40	255.50	248.60	230.20
1980	275.50	288.60	300.60	264.50	258.75	237.50	231.50	245.00	246.25	235.00	247.50	240.10	255.90
1981	234.50	230.25	221.90	211.00	206.25	209.40	211.00	220.60	208.75	208.00	204.40	192.00	213.17
1982	186.25	183.75	209.30	210.60	225.00	232.50	231.00	246.90	213.10	199.50	198.75	244.50	215.10
1983	237.50	216.25	238.50	234.40	236.00	209.40	227.50	218.75	214.00	196.90	176.50	169.40	214.59
1984	162.80	178.00	177.50	175.60	175.70	173.10	146.25	126.40	108.10	120.00	130.40	140.60	151.20
1985	151.25	164.75	170.60	173.50	168.75	152.80	160.00	150.00	170.90	175.00	173.20	178.40	165.76
1986	187.10	183.10	189.40	198.50	175.25	173.10	178.60	191.90	216.90	222.00	222.40	209.75	195.67
1987	212.50	221.00	233.20	242.50	238.75	228.75	237.00	244.00	256.00	356.90	270.00	264.00	250.38
1988	278.75	280.60	271.10	258.80	275.40	261.10	266.00	254.40	229.30	258.10	266.60	217.80	259.83
1989	231.40	225.90	220.10	220.00	194.60								
Fish meal, 65% protein; Domestic, East Coast:													
1970	174.00	188.10	190.00	187.00	182.00	178.75	179.00	174.50	170.00	154.30	152.75	162.00	174.37
1971	160.00	160.00	160.00	162.00	164.00	165.00	165.25	160.25	180.20	176.75	179.50	191.80	168.73
1972	199.00	216.00	231.25	280.00	375.00	411.90	420.00	407.50	465.00	570.00	536.00	490.60	383.52
1973	462.50	420.00	411.25	587.50	538.00	446.25	405.00	337.00	276.25	258.75	252.00	312.50	392.25
1974	271.25	299.00	298.75	275.00	256.25	228.75	220.00	240.00	225.00	219.00	237.50	251.25	251.81
1975	257.00	268.75	270.00	267.00	271.90	272.00	279.00	270.00	282.50	352.50	383.75	332.50	292.24
1976	366.25	363.10	368.50	402.50	405.00	423.10	437.50	481.25	489.50	421.25	313.30	319.40	399.22
1977	335.00	342.50	353.00	363.75	365.00	362.50	377.50	395.00	373.00	356.25	316.90	333.50	356.16
1978	353.75	370.00	388.75	391.25	388.00	383.75	395.00	406.25	390.00	375.00	382.00	355.00	381.56
1979	353.75	366.00	370.00	381.25	391.50	403.75	398.75	375.00	355.00	342.50	365.00	380.00	373.54
1980	427.00	460.00	502.50	490.00	468.75	421.25	405.00	418.75	413.75	404.00	391.25	365.00	430.00
1981	378.00	383.75	370.00	354.00	370.00	377.50	377.00	360.00	360.00	335.00	306.25	315.50	357.25
1982	311.25	324.25	346.00	370.00	375.00	370.00	363.00	362.50	357.50	336.50	325.00	397.00	353.17
1983	415.00	425.00	423.50	407.50	392.60	373.75	383.75	381.25	360.00	354.00	329.00	298.75	378.68
1984	291.90	295.00	309.50	308.25	308.90	290.90	280.60	280.00	231.75	208.90	205.80	207.25	268.23
1985	240.50	284.50	259.00	297.50	291.00	287.50	320.00	290.00	286.90	272.50	278.00	303.10	284.21
1986	320.40	318.00	317.50	315.80	313.30	315.75	N.Q.	N.Q.	335.80	359.50	353.75	363.10	331.29
1987	364.30	372.50	401.25	449.50	448.75	420.80	N.Q.	426.25	456.25	553.50	571.00	527.50	453.78
1988	530.00	523.10	505.00	471.90	463.50	436.60	427.50	413.10	395.00	383.75	396.90	397.00	445.28
1989	382.50	381.00	384.40	386.25	388.50								

See footnotes at end of table.

Continued--

Appendix table 11--Byproduct feeds: Average wholesale price a ton, bulk, specified markets, by months, 1970 to date--Continued

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
						$/ton							
Hominy feed, Illinois Points:													
1970	49.80	45.90	47.20	53.30	52.40	43.40	46.70	47.90	45.10	47.00	45.50	40.30	47.04
1971	33.50	36.25	38.60	44.10	40.60	35.90	38.75	41.25	34.30	33.75	37.50	42.10	38.05
1972	47.60	44.80	49.40	54.50	54.50	47.90	47.90	43.25	63.20	77.60	73.60	98.75	58.58
1973	76.00	81.50	90.75	95.00	92.20	90.90	88.40	87.20	79.90	79.10	101.00	124.75	90.56
1974	99.10	116.00	115.00	103.00	93.00	74.75	74.75	87.50	78.20	79.75	80.00	91.60	91.05
1975	93.00	82.90	81.25	81.80	83.00	81.00	77.30	75.40	85.90	94.20	99.90	90.10	85.48
1976	92.40	85.40	76.60	83.90	83.90	82.25	73.90	79.75	78.50	76.70	62.90	50.70	77.24
1977	57.00	61.50	67.40	75.00	67.70	70.50	72.25	72.60	78.10	81.25	67.50	63.70	69.54
1978	65.10	68.50	78.10	69.50	69.20	76.75	71.90	73.00	83.60	91.00	94.20	93.75	77.88
1979	94.70	85.70	82.50	91.20	84.80	75.00	77.50	79.00	82.00	81.25	90.00	106.00	85.80
1980	116.20	105.75	118.50	121.80	118.25	103.50	99.80	111.25	108.25	95.90	99.75	94.00	107.75
1981	88.10	88.25	83.75	79.60	81.75	69.00	65.20	79.50	85.00	85.80	81.75	70.90	79.88
1982	73.90	73.00	82.00	79.60	77.90	80.75	88.60	107.00	109.50	109.00	112.75	116.80	92.57
1983	121.50	118.75	122.20	117.50	114.40	105.50	108.25	109.75	102.80	102.75	96.90	97.50	109.82
1984	101.80	88.70	76.90	78.75	81.00	73.90	70.25	78.70	82.75	78.30	83.10	80.25	81.20
1985	76.75	76.50	77.25	85.80	85.00	84.90	84.50	86.40	85.25	82.50	72.40	74.25	80.96
1986	75.00	61.60	65.75	64.40	60.50	58.75	51.50	52.75	67.00	69.40	73.60	70.75	64.25
1987	64.70	65.60	71.00	80.20	80.40	77.75	79.40	80.10	82.10	93.10	103.60	101.00	81.58
1988	101.25	98.00	89.90	94.40	97.60	90.60	93.90	96.75	89.00	83.75	81.90	82.90	91.66
1989	89.00	91.00	85.75	88.70	85.80								
Dehydrated alfalfa meal, 17% protein (reround), Kansas City:													
1970	46.00	46.20	48.40	48.90	48.90	49.90	50.70	52.50	49.25	44.60	45.75	46.00	48.09
1971	46.00	46.00	46.80	48.75	49.75	49.70	49.70	49.40	49.70	45.80	47.10	48.20	48.08
1972	50.00	53.00	62.60	75.70	92.80	106.70	94.80	70.80	71.40	72.70	74.50	83.20	75.68
1973	77.60	101.50	103.60	104.70	104.80	102.60	94.20	82.00	75.40	68.20	76.70	93.75	90.42
1974	89.75	92.00	89.25	87.00	84.25	77.10	74.40	75.90	77.00	74.70	76.60	81.50	81.62
1975	82.60	87.30	92.40	98.70	110.20	108.20	111.40	108.40	91.40	94.20	99.90	103.00	98.98
1976	115.20	115.50	111.10	112.10	112.80	111.30	104.25	95.30	91.40	85.00	74.90	66.40	99.60
1977	64.30	67.90	70.90	74.40	73.20	72.80	80.90	82.60	77.50	76.20	76.90	77.20	74.57
1978	81.20	92.90	98.90	99.20	100.60	103.50	105.10	104.60	102.30	99.50	102.80	98.80	99.12
1979	100.80	111.00	112.10	112.60	112.60	112.80	110.60	104.90	100.10	96.80	104.00	118.10	108.03
1980	120.10	122.70	132.00	136.20	135.50	131.90	125.60	126.10	118.00	112.40	112.60	108.60	123.48
1981	106.00	109.40	110.20	110.10	109.40	105.40	99.90	99.80	105.80	105.90	103.80	102.50	105.68
1982	105.40	109.60	115.50	118.80	119.60	121.10	121.10	131.10	136.10	115.70	114.80	120.10	119.08
1983	123.60	128.90	131.90	134.10	139.70	143.60	141.10	142.40	143.30	117.40	110.10	109.40	130.46
1984	111.80	114.50	117.20	115.40	110.50	104.80	95.50	94.30	91.70	87.25	86.90	85.80	101.30
1985	86.10	88.80	92.60	94.90	97.70	97.60	99.10	104.10	99.80	92.50	79.70	81.40	92.86
1986	84.20	86.60	90.10	94.50	96.40	95.60	94.60	96.60	96.40	90.00	90.60	91.60	92.27
1987	93.80	100.10	101.60	103.50	105.25	106.75	106.20	105.00	103.00	113.00	126.25	127.60	107.67
1988	130.50	133.50	136.40	138.80	139.00	138.00	141.00	145.50	149.20	134.00	129.25	125.00	136.68
1989	124.25	125.00	129.50	133.75	162.00								
Molasses beet pulp, Los Angeles:													
1970	48.00	48.30	48.30	53.90	57.70	57.70	57.70	57.70	57.00	55.20	55.40	55.40	54.36
1971	54.90	53.40	53.80	55.50	55.60	55.60	55.60	55.60	56.20	58.60	58.60	58.75	56.01
1972	59.25	59.60	61.60	66.60	73.80	73.80	73.80	73.20	71.30	72.60	71.30	71.30	69.01
1973	90.60	101.50	108.00	108.00	110.50	112.60	111.30	101.00	92.75	90.40	97.75	111.40	102.98
1974	128.25	130.00	131.00	126.60	117.50	108.75	96.00	85.40	87.00	84.75	90.90	104.90	107.59
1975	117.60	116.00	111.25	109.00	108.00	108.00	106.60	101.00	101.00	101.40	103.25	104.00	107.26
1976	103.50	101.75	101.75	101.40	99.70	101.75	105.00	100.90	99.00	96.70	94.90	91.60	99.83
1977	85.75	83.25	84.60	88.75	93.40	96.80	102.50	101.10	101.80	100.80	103.40	101.50	95.30
1978	102.75	109.10	113.75	115.00	116.80	118.00	118.00	113.00	110.00	111.75	118.50	120.50	113.93
1979	122.60	130.60	139.00	141.25	141.25	129.40	123.75	118.25	110.90	110.90	115.00	121.50	125.37
1980	127.50	127.40	134.60	142.00	143.90	152.50	NQ	137.60	130.75	123.00	122.60	119.25	132.83
1981	116.00	108.75	108.75	112.25	116.70	121.40	123.50	111.50	113.50	114.70	115.10	116.50	114.89
1982	114.60	119.00	119.00	122.90	121.40	120.00	123.00	124.50	125.00	123.00	119.10	120.20	120.98
1983	130.00	130.60	130.00	N.Q.	N.Q.	N.Q.	N.Q.	123.00	121.80	121.00	124.80	124.00	125.65
1984	118.00	120.30	123.50	124.60	129.50	130.00	125.10	120.10	112.60	105.50	105.90	106.00	118.43
1985	104.00	107.00	111.50	117.40	119.00	121.00	118.50	111.40	105.25	99.50	96.50	96.00	108.92
1986	91.40	90.00	91.90	95.80	103.00	105.00	101.00	94.60	88.75	88.50	88.50	89.50	94.00
1987	89.50	90.25	92.25	95.50	99.50	N.Q.	N.Q.	N.Q.	100.00	103.00	115.00	122.50	100.83
1988	127.50	129.25	129.00	129.00	127.00	128.50	133.00	124.50	125.40	70.00	77.00	68.00	114.01
1989	65.00	65.50	118.10	121.50	NQ								

NQ = No quotes.

Source: Grain and Feed Market News, AMS, USDA.

Appendix table 12--Corn, sorghum, barley, and oats exports, 1975/76 to date 1/

Year and month	Corn		Sorghum	Year and month	Barley		Oats	
	Grain only	Total			Grain only	Total	Grain only	Total
	Bushels				Bushels			
1975/76				1975/76				
Sept.	75,053,640	76,955,227	27,989,402	June	836,264	975,155	57,472	61,893
Oct.	132,616,891	133,765,971	15,087,217	July	1,950,140	2,047,409	206,451	405,851
Nov.	165,253,446	166,208,159	23,107,812	Aug.	940,228	1,013,720	156,478	311,810
1st Qtr.	372,923,977	376,929,357	66,184,431	1st Qtr.	3,726,632	4,036,284	420,401	779,554
Dec.	152,819,984	153,718,172	25,175,934	Sept.	368,773	415,306	1,707,307	1,857,893
Jan.	137,508,424	138,396,658	28,001,886	Oct.	3,232,356	3,290,346	2,690,989	2,782,316
Feb.	136,507,142	137,397,080	19,016,748	Nov.	1,374,011	1,430,450	2,673,189	2,828,325
2nd Qtr.	426,835,550	429,511,910	72,194,568	2nd Qtr.	4,975,140	5,136,102	7,071,485	7,468,534
Mar.	128,992,136	130,102,227	21,010,849	Dec.	4,898,838	4,971,035	2,451,702	2,485,337
Apr.	164,220,528	165,366,095	16,787,280	Jan.	1,015,730	1,099,219	92,717	227,968
May	153,177,354	154,037,515	3,622,364	Feb.	137,889	268,500	164,429	332,902
3rd Qtr.	446,390,018	449,505,837	41,420,493	3rd Qtr.	6,052,457	6,338,754	2,708,848	3,046,207
June	159,436,466	160,639,012	7,894,661	Mar.	2,081,973	2,204,333	96,554	102,936
July	138,125,613	139,325,780	22,413,313	Apr.	1,330,542	1,404,961	196,085	505,098
Aug.	120,781,441	121,796,742	22,054,372	May	4,634,179	4,654,198	1,783,345	1,807,957
4th Qtr.	418,343,520	421,761,534	52,362,346	4th Qtr.	8,046,694	8,263,492	2,075,984	2,415,991
Total	1,664,493,065	1,677,708,638	232,161,838	Total	22,800,923	23,774,632	12,276,718	13,710,286
1976/77				1976/77				
Sept.	109,747,811	110,623,219	24,870,524	June	1,303,146	1,462,324	365,100	399,404
Oct.	178,936,003	179,779,470	16,635,698	July	3,287,074	3,355,973	61,659	253,988
Nov.	180,098,843	181,073,558	20,549,541	Aug.	3,478,167	3,498,931	2,244,591	2,297,468
1st Qtr.	468,782,657	471,476,247	62,055,763	1st Qtr.	8,068,387	8,317,228	2,671,350	2,950,860
Dec.	136,223,158	137,114,535	24,648,500	Sept.	6,615,438	6,722,402	1,920,409	1,928,142
Jan.	126,956,735	127,714,378	25,601,274	Oct.	13,048,078	13,356,005	570,607	867,353
Feb.	119,422,523	120,421,394	30,474,848	Nov.	7,064,569	7,271,589	2,149,816	2,187,001
2nd Qtr.	382,602,416	385,250,307	80,724,622	2nd Qtr.	26,728,085	27,349,996	4,640,832	4,982,496
Mar.	150,674,935	151,409,204	27,022,891	Dec.	7,109,317	7,222,045	603,985	630,520
Apr.	141,387,428	142,381,424	20,838,684	Jan.	3,290,070	3,380,086	84,385	146,665
May	138,834,555	139,761,801	13,598,209	Feb.	8,348,213	8,453,835	29,925	167,523
3rd Qtr.	430,896,918	433,552,429	61,459,784	3rd Qtr.	18,747,600	19,055,966	718,295	944,708
June	125,506,250	126,829,574	10,599,319	Mar.	975,528	1,069,154	57,888	217,299
July	116,130,094	117,169,062	20,078,292	Apr.	1,620,641	1,798,769	26,399	191,167
Aug.	121,200,994	122,269,617	18,996,553	May	8,647,500	8,739,038	179,887	351,199
4th Qtr.	362,837,338	366,268,253	49,674,164	4th Qtr.	11,243,669	11,606,961	264,174	759,665
Total	1,645,119,329	1,656,547,236	253,914,333	Total	64,787,741	66,330,151	8,294,651	9,637,729
1977/78				1977/78				
Sept.	137,146,892	138,242,808	17,077,461	June	7,678,469	7,749,102	485,973	621,814
Oct.	118,932,956	120,088,403	8,628,406	July	11,291,749	11,439,168	412,342	566,723
Nov.	143,025,556	143,918,611	17,228,249	Aug.	6,149,089	6,260,217	1,064,326	1,109,150
1st Qtr.	399,105,404	402,249,822	42,934,116	1st Qtr.	25,119,307	25,448,487	1,962,641	2,297,687
Dec.	153,111,226	154,319,205	30,106,414	Sept.	9,278,826	9,462,496	48,597	359,154
Jan.	126,914,873	127,837,959	21,237,901	Oct.	8,026,753	8,071,324	1,155,584	1,289,871
Feb.	127,836,745	128,666,686	22,910,641	Nov.	2,186,923	2,354,670	2,896,689	3,064,137
2nd Qtr.	407,862,844	410,823,850	74,254,956	2nd Qtr.	19,492,502	19,888,490	4,100,870	4,713,162
Mar.	156,643,619	158,036,734	23,826,344	Dec.	3,856,164	4,003,955	2,369,271	2,428,974
Apr.	160,804,806	161,848,500	17,768,956	Jan.	1,413,634	1,597,572	217,675	406,388
May	206,846,481	208,302,073	18,074,476	Feb.	271,263	466,385	394,969	682,456
3rd Qtr.	524,294,906	528,187,307	59,669,776	3rd Qtr.	5,541,061	6,067,912	2,981,915	3,517,818
June	214,018,311	214,770,184	10,145,984	Mar.	145,741	258,834	28,124	445,153
July	171,102,334	172,090,084	19,738,833	Apr.	2,017,960	2,269,261	23,525	261,335
Aug.	180,012,802	181,086,842	16,098,547	May	3,180,917	3,272,925	905,899	1,036,135
4th Qtr.	565,133,447	567,947,110	45,983,364	4th Qtr.	5,344,618	5,801,020	957,548	1,742,623
Total	1,896,396,601	1,909,208,089	222,842,212	Total	55,497,488	57,205,909	10,002,974	12,271,290

See footnotes at end of table.

Continued--

Appendix table 12--Corn, sorghum, barley, and oats exports, 1975/76 to date 1/--Continued

Year and month	Corn		Sorghum	Year and month	Barley		Oats	
	Grain only	Total			Grain only	Total	Grain only	Total
	Bushels				Bushels			
1978/79				1978/79				
Sept.	176,033,904	176,861,083	7,735,700	June	4,205,002	4,353,093	435,464	588,122
Oct.	139,263,490	139,981,749	8,615,589	July	5,066,677	5,156,021	1,303,880	1,668,021
Nov.	153,542,028	154,313,955	18,954,600	Aug.	4,929,079	5,006,603	5,293,313	5,369,592
1st Qtr.	468,839,422	471,156,787	35,305,889	1st Qtr.	14,200,758	14,515,717	7,032,657	7,625,735
Dec.	158,883,560	159,709,773	18,988,714	Sept.	4,242,932	4,291,050	48,251	250,893
Jan.	129,906,845	130,856,541	19,285,385	Oct.	3,080,214	3,167,923	1,343,835	1,576,218
Feb.	124,518,081	125,094,088	26,989,459	Nov.	978,381	1,019,054	285,557	519,770
2nd Qtr.	413,308,486	415,660,402	65,263,558	2nd Qtr.	8,301,527	8,478,027	1,677,643	2,346,881
Mar.	169,263,126	170,303,627	22,069,207	Dec.	266,814	471,044	1,227,047	1,336,346
Apr.	187,095,271	188,081,747	13,038,349	Jan.	574,365	682,389	41,947	283,427
May	198,288,881	199,135,575	14,922,212	Feb.	46,265	107,278	28,584	138,700
3rd Qtr.	554,647,278	557,520,949	50,029,768	3rd Qtr.	887,444	1,260,711	1,297,578	1,758,473
June	229,474,993	230,777,184	9,452,058	Mar.	3,735	41,817	54,088	288,819
July	221,669,115	222,671,382	13,011,285	Apr.	220,154	309,868	81,658	237,250
Aug.	225,178,576	225,884,821	17,029,193	May	1,035,595	1,091,820	195,887	418,606
4th Qtr.	676,322,684	679,333,387	39,492,536	4th Qtr.	1,259,484	1,443,505	331,633	944,675
Total	2,113,117,870	2,123,671,525	190,091,751	Total	24,649,213	25,697,960	10,339,511	12,675,764
1979/80				1979/80				
Sept.	185,070,433	186,246,851	24,223,910	June	2,212,317	2,282,851	120,868	247,616
Oct.	214,345,983	215,526,560	21,583,642	July	2,446,725	2,527,595	42,528	140,915
Nov.	221,857,150	223,007,799	26,229,212	Aug.	2,719,552	2,811,124	105,109	254,874
1st Qtr.	621,273,566	624,781,210	72,036,764	1st Qtr.	7,378,594	7,621,570	268,505	643,405
Dec.	223,411,029	224,356,785	26,386,501	Sept.	2,221,823	2,276,736	144,474	211,556
Jan.	189,912,018	190,929,805	37,438,737	Oct.	9,284,368	9,514,648	95,188	164,665
Feb.	184,412,948	185,516,630	39,082,513	Nov.	8,143,400	8,336,890	870,027	984,369
2nd Qtr.	597,735,995	600,803,220	102,907,751	2nd Qtr.	19,649,591	20,128,274	1,109,689	1,360,590
Mar.	204,333,868	205,545,642	32,000,475	Dec.	4,218,627	4,500,253	645,337	726,279
Apr.	213,500,454	214,521,960	35,394,225	Jan.	3,042,486	3,173,696	98,074	275,844
May	169,938,362	171,104,012	24,939,765	Feb.	3,641,315	3,911,450	18,760	97,572
3rd Qtr.	587,772,684	591,171,614	92,334,465	3rd Qtr.	10,902,428	11,585,399	762,171	1,099,695
June	191,853,582	193,158,972	24,957,177	Mar.	3,843,733	4,052,579	60,276	89,764
July	196,938,173	198,356,492	22,312,730	Apr.	6,525,141	6,692,569	229,439	418,534
Aug.	205,942,297	207,054,727	15,122,775	May	4,520,778	4,747,733	327,568	430,851
4th Qtr.	594,734,052	598,570,191	62,392,682	4th Qtr.	14,889,652	15,492,881	617,283	939,149
Total	2,401,516,297	2,415,326,235	329,671,662	Total	52,820,265	54,828,124	2,757,648	4,042,839
1980/81				1980/81				
Sept.	202,462,112	203,528,019	19,533,279	June	5,022,971	5,097,866	580,924	1,006,889
Oct.	240,698,485	242,279,498	22,543,461	July	3,628,339	3,702,871	327,415	785,586
Nov.	244,706,069	245,871,275	25,367,196	Aug.	9,211,534	9,349,242	638,725	1,101,431
1st Qtr.	687,866,666	691,678,792	67,443,936	1st Qtr.	17,862,844	18,149,979	1,547,064	2,893,906
Dec.	238,328,292	239,663,630	18,308,338	Sept.	6,658,108	6,740,218	793,059	953,125
Jan.	207,962,746	209,110,242	28,807,953	Oct.	5,504,702	5,554,355	1,306,243	1,597,563
Feb.	199,682,732	200,654,523	28,934,912	Nov.	6,666,060	6,808,903	46,960	363,072
2nd Qtr.	645,973,770	649,428,395	76,051,203	2nd Qtr.	18,828,870	19,103,476	2,146,262	2,913,760
Mar.	221,866,761	223,109,865	26,318,245	Dec.	8,916,215	9,085,383	785,897	861,436
Apr.	184,884,549	186,633,809	19,487,235	Jan.	6,315,403	6,388,116	189,156	573,991
May	207,201,786	209,094,680	22,218,323	Feb.	11,466,729	11,500,117	1,087,421	1,400,038
3rd Qtr.	613,953,096	618,838,354	68,023,803	3rd Qtr.	26,698,347	26,973,616	2,062,474	2,835,465
June	157,486,785	159,443,572	19,998,909	Mar.	4,666,953	4,776,513	230,384	633,818
July	146,636,959	148,074,369	29,469,237	Apr.	3,516,330	3,542,993	1,560,078	2,260,296
Aug.	139,188,454	140,514,903	32,171,898	May	4,087,044	4,173,387	1,293,251	1,730,912
4th Qtr.	443,312,198	448,032,844	81,640,044	4th Qtr.	12,270,327	12,492,893	3,083,713	4,625,026
Total	2,391,105,730	2,407,978,385	293,158,986	Total	75,660,388	76,719,964	8,839,513	13,268,157

See footnotes at end of table.

Continued--

Appendix table 12--Corn, sorghum, barley, and oats exports, 1975/76 to date 1/--Continued

Year and month	Corn		Sorghum	Year and month	Barley		Oats	
	Grain only	Total			Grain only	Total	Grain only	Total
	Bushels				Bushels			
1981/82				1981/82				
Sept.	149,655,085	150,744,952	30,963,092	June	1,457,555	1,508,625	372,009	549,202
Oct.	194,694,429	195,728,034	28,388,473	July	6,528,945	6,661,102	366,463	1,092,743
Nov.	174,729,965	176,251,502	18,657,408	Aug.	12,243,107	12,365,441	648,960	782,716
1st Qtr.	519,079,479	522,724,488	78,008,973	1st Qtr.	20,229,607	20,535,168	1,387,432	2,424,661
Dec.	172,337,796	173,551,973	30,772,465	Sept.	11,902,257	12,026,473	436,435	793,962
Jan.	150,895,856	151,627,601	29,552,315	Oct.	16,462,060	16,507,711	202,460	505,977
Feb.	146,989,364	147,749,277	19,453,452	Nov.	8,631,927	8,722,744	59,430	402,684
2nd Qtr.	470,223,016	472,928,851	79,778,232	2nd Qtr.	36,996,244	37,256,928	698,325	1,702,623
Mar.	189,001,536	190,066,366	25,286,333	Dec.	7,636,656	7,746,899	72,350	266,238
Apr.	194,887,043	195,755,373	13,509,047	Jan.	8,332,073	8,455,568	114,472	443,737
May	211,950,747	213,198,644	8,259,377	Feb.	8,088,777	8,207,953	122,192	265,405
3rd Qtr.	595,839,326	599,020,383	47,054,757	3rd Qtr.	24,057,506	24,410,420	309,014	975,380
June	179,668,292	180,443,235	11,386,253	Mar.	5,887,140	6,474,477	99,231	450,891
July	119,477,568	120,516,417	20,242,006	Apr.	3,808,701	3,863,179	38,448	553,340
Aug.	112,474,351	113,953,288	23,142,497	May	7,403,111	7,517,119	154,417	446,421
4th Qtr.	411,620,211	414,912,940	54,770,756	4th Qtr.	17,098,952	17,854,775	292,096	1,450,652
Total	1,996,762,032	2,009,586,662	259,612,718	Total	98,382,309	100,057,291	2,686,867	6,553,316
1982/83				1982/83				
Sept.	107,215,457	108,059,024	20,428,581	June	5,928,163	6,296,843	52,361	603,692
Oct.	166,335,228	167,217,946	18,383,056	July	4,165,507	4,862,814	70,751	240,205
Nov.	169,586,560	170,887,184	19,234,195	Aug.	8,196,824	8,579,926	48,700	197,183
1st Qtr.	443,137,245	446,164,154	58,045,832	1st Qtr.	18,290,494	19,739,583	171,812	1,041,080
Dec.	173,558,165	174,573,008	29,354,316	Sept.	5,561,112	5,678,174	197,917	289,602
Jan.	174,707,042	175,440,799	25,050,652	Oct.	1,440,901	1,516,155	71,782	581,391
Feb.	161,304,672	162,010,945	17,975,892	Nov.	2,494,002	2,987,818	158,162	197,106
2nd Qtr.	509,569,879	512,024,752	72,380,860	2nd Qtr.	9,496,015	10,182,147	427,861	1,068,099
Mar.	169,409,637	170,420,490	19,694,606	Dec.	1,833,788	1,940,049	29,127	210,451
Apr.	157,314,623	158,573,125	5,348,135	Jan.	7,454,630	7,580,831	41,047	75,440
May	148,587,837	149,958,142	8,726,291	Feb.	1,410,838	1,492,942	32,518	123,897
3rd Qtr.	475,312,097	478,951,757	33,769,032	3rd Qtr.	10,699,256	11,013,822	102,692	409,788
June	150,589,182	151,822,069	9,889,322	Mar.	3,523,829	3,669,317	26,152	80,122
July	123,534,997	124,569,819	16,494,246	Apr.	29,375	223,988	16,040	207,447
Aug.	119,201,764	120,193,101	19,474,765	May	2,130,966	2,395,182	5,867	206,939
4th Qtr.	393,325,943	396,584,989	45,858,333	4th Qtr.	5,684,170	6,288,487	48,059	494,508
Total	1,821,345,164	1,833,725,652	210,054,057	Total	44,169,935	47,224,039	750,424	3,013,475
1983/84				1983/84				
Sept.	142,605,075	144,282,518	24,843,392	June	1,749,278	1,962,746	20,066	170,314
Oct.	154,746,149	155,588,111	22,517,772	July	1,219,801	1,332,753	85,615	276,124
Nov.	196,023,261	197,175,227	20,090,581	Aug.	5,858,487	5,950,159	16,399	190,354
1st Qtr.	493,374,485	497,045,856	67,451,745	1st Qtr.	8,827,566	9,245,658	122,080	636,792
Dec.	175,217,363	176,176,687	19,536,615	Sept.	14,055,167	14,152,120	66,102	120,532
Jan.	172,472,646	173,394,560	27,006,928	Oct.	8,017,640	8,100,296	348,182	489,411
Feb.	158,202,220	158,971,946	25,013,805	Nov.	9,025,053	9,128,165	84,892	128,597
2nd Qtr.	505,892,229	508,543,193	71,557,348	2nd Qtr.	31,097,860	31,380,581	499,176	738,540
Mar.	176,208,558	177,553,953	25,761,817	Dec.	15,402,481	15,638,039	42,383	128,719
Apr.	174,344,582	175,342,494	14,599,452	Jan.	7,544,651	7,820,115	27,417	88,611
May	162,845,594	164,383,668	14,890,486	Feb.	5,797,474	6,047,572	15,377	47,266
3rd Qtr.	513,398,734	517,280,115	55,251,755	3rd Qtr.	28,744,606	29,505,726	85,177	264,596
June	110,199,008	112,251,470	10,354,830	Mar.	10,841,262	11,217,537	39,239	198,298
July	128,242,982	130,068,232	21,979,636	Apr.	5,570,656	5,968,499	171,313	220,808
Aug.	135,289,472	136,339,843	17,884,104	May	3,735,785	4,106,217	24,589	113,676
4th Qtr.	373,731,462	378,659,545	50,218,570	4th Qtr.	20,147,703	21,292,253	235,141	532,782
Total	1,886,396,910	1,901,528,709	244,479,418	Total	88,817,735	91,424,218	941,574	2,172,710

See footnotes at end of table.

Continued--

Appendix table 12--Corn, sorghum, barley, and oats exports, 1975/76 to date 1/--Continued

Year and month	Corn		Sorghum	Year and month	Barley		Oats	
	Grain only	Total			Grain only	Total	Grain only	Total
	Bushels				Bushels			
1984/85				1984/85				
Sept.	107,064,816	108,016,147	26,778,001	June	4,668,354	4,884,210	16,340	204,719
Oct.	154,055,992	155,233,827	36,290,021	July	1,506,275	2,146,787	51,644	162,650
Nov.	242,124,317	242,966,896	22,711,771	Aug.	4,965,763	5,155,469	28,335	37,065
1st Qtr.	503,245,125	506,216,870	85,779,793	1st Qtr.	11,140,392	12,186,466	96,319	404,434
Dec.	206,686,724	207,683,410	25,549,874	Sept.	17,185,453	17,474,876	58,861	188,704
Jan.	208,081,216	208,846,539	29,096,442	Oct.	8,750,660	8,959,255	78,898	132,116
Feb.	165,648,304	167,345,348	32,640,358	Nov.	9,226,887	9,937,205	25,988	67,587
2nd Qtr.	580,416,244	583,875,297	87,286,614	2nd Qtr.	35,163,000	36,371,336	163,747	388,407
Mar.	170,693,089	171,901,549	26,133,824	Dec.	10,739,791	11,773,706	45,452	66,239
Apr.	167,741,483	169,045,309	19,774,404	Jan.	6,023,494	7,154,739	27,349	56,389
May	136,292,380	137,951,801	17,817,664	Feb.	4,249,537	4,712,199	44,293	107,702
3rd Qtr.	474,726,952	478,898,659	63,725,892	3rd Qtr.	21,012,822	23,640,644	117,094	230,330
June	105,494,909	107,810,557	25,247,583	Mar.	1,173,727	1,258,040	68,000	75,236
July	95,527,431	96,758,258	18,747,724	Apr.	227,362	367,280	35,822	120,640
Aug.	90,839,919	91,826,779	16,117,507	May	2,937,606	3,013,712	13,925	48,363
4th Qtr.	291,862,259	296,395,594	60,112,814	4th Qtr.	4,338,695	4,639,032	117,747	244,239
Total	1,850,250,580	1,865,386,420	296,905,113	Total	71,654,909	76,837,478	494,907	1,267,410
1985/86				1985/86				
Sept.	79,897,274	80,730,953	29,172,725	June	1,487,412	1,649,817	44,678	87,396
Oct.	124,900,086	125,817,956	23,654,139	July	3,731,241	3,860,606	23,529	69,692
Nov.	210,005,197	211,178,800	17,378,277	Aug.	5,179,203	5,303,587	33,906	163,983
1st Qtr.	414,802,557	417,727,709	70,205,141	1st Qtr.	10,397,856	10,814,010	102,113	321,071
Dec.	175,971,674	178,512,062	11,858,105	Sept.	831,326	937,470	52,866	89,470
Jan.	164,709,634	166,061,297	17,264,657	Oct.	2,652,026	2,799,218	120,219	153,203
Feb.	119,524,523	120,682,252	13,994,213	Nov.	3,768,477	3,869,960	111,195	350,174
2nd Qtr.	460,205,831	465,255,611	43,116,975	2nd Qtr.	7,251,829	7,606,648	284,280	592,847
Mar.	97,479,313	98,402,168	6,723,066	Dec.	112,702	237,932	23,556	37,750
Apr.	57,426,414	58,213,068	8,597,402	Jan.	1,119,603	1,546,100	8,934	69,750
May	46,520,450	47,775,127	11,610,994	Feb.	49,160	116,456	43,584	96,515
3rd Qtr.	201,426,177	204,390,363	26,931,462	3rd Qtr.	1,281,465	1,900,488	76,074	204,015
June	55,802,755	56,818,892	10,467,071	Mar.	1,148	192,476	250,397	288,260
July	44,609,875	45,480,958	17,830,311	Apr.	720,309	816,587	49,085	93,425
Aug.	50,484,684	51,552,942	9,436,885	May	57,584	472,599	473,733	693,272
4th Qtr.	150,897,314	153,852,792	37,734,267	4th Qtr.	779,041	1,481,662	773,215	1,074,957
Total	1,227,331,879	1,241,226,475	177,987,845	Total	19,710,191	21,802,808	1,235,682	2,192,890
1986/87				1986/87				
Sept.	80,082,655	81,263,962	14,227,263	June	2,000	276,815	79,108	128,492
Oct.	124,025,138	124,843,757	18,547,828	July	1,164,620	1,597,139	81,504	217,421
Nov.	114,104,314	114,952,811	14,680,456	Aug.	12,319,164	12,514,711	73,364	335,437
1st Qtr.	318,212,107	321,060,530	47,455,547	1st Qtr.	13,485,784	14,388,665	233,976	681,350
Dec.	109,759,488	110,685,062	19,954,747	Sept.	12,772,707	12,912,177	121,288	327,625
Jan.	104,283,400	105,274,114	15,484,239	Oct.	16,480,986	16,559,353	167,403	411,976
Feb.	98,787,906	99,445,787	20,749,712	Nov.	14,292,746	14,363,851	32,293	167,870
2nd Qtr.	312,830,794	315,404,963	56,188,698	2nd Qtr.	43,546,439	43,835,381	320,984	907,471
Mar.	143,717,211	145,375,500	24,415,530	Dec.	14,532,134	14,661,828	17,314	315,049
Apr.	183,288,269	184,280,573	12,956,519	Jan.	1,205,709	1,262,335	30,960	75,145
May	169,091,351	170,576,405	13,788,332	Feb.	16,084,544	16,522,282	30,776	178,452
3rd Qtr.	496,096,831	500,232,478	51,160,381	3rd Qtr.	31,822,387	32,446,445	79,050	568,646
June	120,026,244	120,818,241	12,940,287	Mar.	17,639,725	18,150,611	115,234	277,846
July	133,984,531	134,900,706	22,883,734	Apr.	16,599,968	17,153,570	105,251	191,418
Aug.	111,320,100	112,008,863	7,698,710	May	10,522,937	10,726,481	67,436	168,607
4th Qtr.	365,330,875	367,727,810	43,522,731	4th Qtr.	44,762,630	46,030,662	287,921	637,871
Total	1,492,470,607	1,504,425,781	198,327,357	Total	133,617,240	136,701,153	921,931	2,795,338

See footnotes at end of table.

Continued--

Appendix table 12--Corn, sorghum, barley, and oats exports, 1975/76 to date 1/--Continued

Year and month	Corn		Sorghum	Year and month	Barley		Oats	
	Grain only	Total			Grain only	Total	Grain only	Total
	Bushels				Bushels			
1987/88				1987/88				
Sept.	135,401,494	136,128,505	17,831,044	June	517,681	742,738	104,217	187,886
Oct.	137,692,620	138,784,114	16,734,001	July	7,421,463	7,675,579	50,113	92,430
Nov.	122,467,307	123,085,243	10,968,017	Aug.	8,893,825	9,257,652	18,135	153,171
1st Qtr.	395,561,421	397,997,861	45,533,062	1st Qtr.	16,832,969	17,675,969	172,465	433,487
Dec.	148,173,110	149,269,833	21,239,967	Sept.	9,658,418	10,363,963	36,051	74,210
Jan.	133,336,988	134,196,121	19,399,501	Oct.	16,149,719	17,238,723	62,220	144,789
Feb.	123,237,769	124,218,907	22,498,453	Nov.	16,700,948	18,605,946	38,617	99,130
2nd Qtr.	404,747,867	407,684,861	63,137,921	2nd Qtr.	42,509,085	46,208,631	136,888	318,129
Mar.	164,083,150	165,253,019	24,662,618	Dec.	15,583,102	16,123,445	5,680	36,703
Apr.	166,222,992	166,980,188	30,324,679	Jan.	10,672,812	10,910,229	96,376	147,370
May	179,365,299	180,377,177	22,103,010	Feb.	6,764,525	7,239,965	29,937	148,578
3rd Qtr.	509,671,441	512,610,384	77,090,307	3rd Qtr.	33,020,439	34,273,639	131,993	332,652
June	132,934,667	133,784,539	13,740,797	Mar.	15,349,596	15,756,272	24,173	49,618
July	122,945,548	124,276,098	20,243,604	Apr.	8,796,666	9,029,851	12,420	114,674
Aug.	150,564,179	151,445,670	11,836,824	May	4,470,071	4,979,881	22,950	215,233
4th Qtr.	406,444,394	409,506,307	45,821,225	4th Qtr.	28,616,333	29,766,004	59,543	379,525
Total	1,716,425,122	1,727,799,414	231,582,514	Total	120,978,826	127,924,243	500,889	1,463,793
1988/89				1988/89				
Sept.	150,843,842	151,736,284	26,656,522	June	12,108,210	12,402,962	102,245	258,289
Oct.	170,295,536	171,523,785	19,499,969	July	11,513,586	11,757,762	38,739	88,239
Nov.	149,632,839	151,030,488	18,319,440	Aug.	2,214,904	2,500,232	24,394	145,962
1st Qtr.	470,772,218	474,290,557	64,475,931	1st Qtr.	25,836,700	26,660,955	165,378	492,490
Dec.	172,492,326	173,546,904	27,975,619	Sept.	8,758,198	8,833,519	21,017	90,049
Jan.	175,221,513	176,487,573	32,501,841	Oct.	1,432,089	2,161,176	30,378	57,096
Feb.	154,909,994	158,177,973	33,002,703	Nov.	2,452,268	3,055,490	73,371	126,759
2nd Qtr.	502,623,833	508,212,450	93,480,162	2nd Qtr.	12,642,555	14,050,185	124,766	273,904
Mar.	202,840,169	206,563,860	30,648,140	Dec.	15,121,435	15,440,102	29,605	51,848
Apr.	177,475,933	180,898,856	28,248,011	Jan.	84,517	417,785	115,957	154,015
May	211,303,127	212,764,901	21,239,060	Feb.	81,490	439,958	65,245	112,585
3rd Qtr.	591,619,229	600,227,617	80,135,211	3rd Qtr.	15,287,442	16,297,846	210,807	318,448
June	223,487,607	225,359,132	24,105,107	Mar.	1,964,297	2,424,381	22,487	70,294
July	133,145,813	135,157,047	25,119,434	Apr.	13,817,421	14,373,832	27,765	69,774
Aug.	106,804,440	109,287,340	22,869,115	May	9,781,368	10,571,462	27,121	60,581
4th Qtr.	463,437,860	469,803,519	72,093,656	4th Qtr.	25,563,086	27,369,674	77,373	200,649
Total	2,028,453,139	2,052,534,142	310,184,961	Total	79,329,783	84,378,660	578,324	1,285,491
1989/90				1989/90				
Sept.	113,776,974	116,262,446	37,711,379	June	7,412,020	8,169,340	73,555	134,619
Oct.	174,744,707	177,648,151	33,729,330	July	9,666,205	10,690,552	99,550	154,363
Nov.	293,764,931	296,074,486	22,408,755	Aug.	9,513,210	9,985,797	60,059	185,406
1st Qtr.	582,286,611	589,985,082	93,849,464	1st Qtr.	26,591,434	28,845,688	233,164	474,388
Dec.	258,806,792	260,538,272	19,612,697	Sept.	8,060,139	9,274,483	137,368	245,862
Jan.				Oct.	4,634,063	5,354,195	86,668	183,582
Feb.				Nov.	4,520,961	5,397,789	46,922	103,742
2nd Qtr.				2nd Qtr.	17,215,164	20,026,468	270,958	533,185
Mar.				Dec.	9,913,639	10,571,944	55,999	83,079
Apr.				Jan.				
May				Feb.				
3rd Qtr.				3rd Qtr.				
June				Mar.				
July				Apr.				
Aug.				May				
4th Qtr.				4th Qtr.				
Total				Total				

1/ Total corn exports include grain only (white, yellow, seed, relief), dry process (cornmeal for relief, as grain, grits), and wet process (corn starch, sugar dextrose, glucose, high fructose). Sorghum includes seed and unmilled. Barley includes grain only (grain for malting purposes, other) and barley malt. Oats include grain and oatmeal (bulk and packaged).

Source: Bureau of the Census, U.S. Department of Commerce.

Appendix table 13--Corn, sorghum, barley, and oats imports, 1975/76 to date 1/

Year and month	Corn		Sorghum	Year and month	Barley		Oats	
	Grain only	Total			Grain only	Total	Grain only	Total
	Bushels				Bushels			
1975/76				1975/76				
Sept.	48,468	49,894	1,177	June	759,873	1,016,094	95,341	104,362
Oct.	172,388	204,758	0	July	898,065	1,262,809	87,448	95,062
Nov.	19,550	69,861	0	Aug.	2,358,988	2,707,006	64,522	66,588
1st Qtr.	240,406	324,513	1,177	1st Qtr.	4,016,926	4,985,909	247,311	266,012
Dec.	267,752	303,437	0	Sept.	1,436,833	1,804,423	6,357	9,663
Jan.	184,083	221,905	0	Oct.	783,803	1,093,718	8,574	30,049
Feb.	144,936	176,862	0	Nov.	781,713	1,169,351	19,070	21,484
2nd Qtr.	596,771	702,204	0	2nd Qtr.	3,002,349	4,067,492	34,001	61,196
Mar.	134,347	145,986	0	Dec.	2,025,728	2,352,469	27,389	42,320
Apr.	48,183	55,922	0	Jan.	835,254	1,087,702	107,560	132,659
May	22,372	27,433	0	Feb.	784,581	969,243	35,929	47,306
3rd Qtr.	204,902	229,341	0	3rd Qtr.	3,645,563	4,409,414	170,878	222,285
June	304,818	315,434	70	Mar.	590,585	690,283	21,257	23,335
July	78,435	87,714	48	Apr.	587,540	659,960	27,889	48,705
Aug.	72,218	76,070	0	May	858,273	964,963	11,753	14,926
4th Qtr.	455,471	479,218	118	4th Qtr.	2,036,398	2,315,206	60,899	86,966
Total	1,497,550	1,735,276	1,295	Total	12,701,236	15,778,021	513,089	636,459
1976/77				1976/77				
Sept.	136,434	138,356	0	June	2,009,994	2,236,414	15,553	34,491
Oct.	83,151	94,029	0	July	637,977	857,761	64,577	67,191
Nov.	266,733	314,577	0	Aug.	1,245,395	1,467,011	4,525	12,429
1st Qtr.	486,318	546,962	0	1st Qtr.	3,893,366	4,561,186	84,655	114,111
Dec.	177,310	190,508	0	Sept.	798,349	1,046,108	21,936	29,934
Jan.	70,481	96,489	0	Oct.	4,818	141,142	14,876	32,860
Feb.	145,926	157,106	0	Nov.	196,948	318,012	14,817	20,315
2nd Qtr.	393,717	444,103	0	2nd Qtr.	1,000,115	1,505,262	51,629	83,109
Mar.	7,498	27,487	0	Dec.	404,334	538,177	78,462	89,895
Apr.	87,050	99,854	188	Jan.	946,916	1,102,450	120,235	132,798
May	438,329	443,685	95	Feb.	493,961	624,453	197,133	206,396
3rd Qtr.	532,877	571,026	283	3rd Qtr.	1,845,211	2,265,080	395,830	429,089
June	312,460	313,099	0	Mar.	738,623	902,746	284,257	300,785
July	185,817	186,291	0	Apr.	632,074	833,943	218,521	232,344
Aug.	519,655	520,236	0	May	498,445	802,958	330,055	336,989
4th Qtr.	1,017,932	1,019,626	0	4th Qtr.	1,869,142	2,539,647	832,833	870,118
Total	2,430,844	2,581,717	283	Total	8,607,834	10,871,175	1,364,947	1,496,427
1977/78				1977/78				
Sept.	97,920	100,788	0	June	2,368,640	2,764,183	740,077	750,825
Oct.	482,174	505,782	0	July	412,910	853,478	129,463	151,280
Nov.	60,677	97,097	0	Aug.	569,880	1,019,874	65,239	78,558
1st Qtr.	640,771	703,667	0	1st Qtr.	3,351,430	4,637,535	934,779	980,663
Dec.	75,411	96,626	0	Sept.	243,812	473,873	122,581	137,312
Jan.	158,735	183,155	0	Oct.	28,317	239,542	99,251	111,619
Feb.	421,573	436,495	0	Nov.	482,820	650,891	168,296	175,801
2nd Qtr.	655,719	716,276	0	2nd Qtr.	754,949	1,364,306	390,128	424,732
Mar.	236,524	283,308	0	Dec.	839,755	938,042	175,350	187,530
Apr.	156,639	168,200	196	Jan.	712,903	913,625	108,038	116,324
May	133,843	145,851	24	Feb.	250,900	431,801	143,408	161,229
3rd Qtr.	527,006	597,359	220	3rd Qtr.	1,803,558	2,283,468	426,796	465,083
June	83,059	90,792	0	Mar.	241,366	457,093	118,171	129,606
July	188,531	194,522	10,231	Apr.	69,881	225,945	121,018	135,023
Aug.	302,798	304,310	11,101	May	221,767	505,948	95,055	110,756
4th Qtr.	574,388	589,624	21,332	4th Qtr.	533,014	1,188,986	334,244	375,385
Total	2,397,884	2,606,926	21,552	Total	6,442,951	9,474,295	2,085,947	2,245,863

See footnotes at end of table.

Continued--

Appendix table 13--Corn, sorghum, barley, and oats imports, 1975/76 to date 1/--Continued

Year and month	Corn		Sorghum	Year and month	Barley		Oats	
	Grain only	Total			Grain only	Total	Grain only	Total
	Bushels				Bushels			
1978/79				1978/79				
Sept.	80,998	82,019	0	June	276,896	532,672	127,847	137,213
Oct.	11,397	21,149	0	July	986,064	1,418,338	37,885	47,913
Nov.	42,821	54,334	0	Aug.	234,024	548,660	23,378	32,299
1st Qtr.	135,216	157,502	0	1st Qtr.	1,496,984	2,499,670	189,110	217,425
Dec.	59,339	72,321	0	Sept.	40,043	255,486	32,927	44,496
Jan.	243,704	260,550	0	Oct.	110,994	429,614	25,408	32,598
Feb.	1,039	50,782	0	Nov.	825,557	1,049,732	25,151	34,041
2nd Qtr.	304,082	383,653	0	2nd Qtr.	976,594	1,734,832	83,486	111,135
Mar.	103,947	116,395	0	Dec.	971,916	1,281,034	39,165	51,008
Apr.	69,498	76,740	0	Jan.	797,988	1,134,539	60,200	71,444
May	122,910	130,212	1,890	Feb.	384,319	650,039	57,616	67,459
3rd Qtr.	296,355	323,347	1,890	3rd Qtr.	2,154,223	3,065,612	156,981	189,911
June	47,909	49,367	0	Mar.	899,926	1,274,511	80,120	87,131
July	278,155	280,696	0	Apr.	447,587	845,535	67,809	74,249
Aug.	90,816	94,387	0	May	737,200	1,117,318	47,728	67,072
4th Qtr.	416,880	424,450	0	4th Qtr.	2,084,713	3,237,364	195,657	228,452
Total	1,152,533	1,288,952	1,890	Total	6,712,514	10,537,478	625,234	746,923
1979/80				1979/80				
Sept.	67,261	70,547	17	June	508,172	956,165	66,902	75,963
Oct.	60,135	91,870	33	July	1,053,302	1,401,581	32,700	53,911
Nov.	87,671	96,674	0	Aug.	184,716	853,786	103,339	112,444
1st Qtr.	215,067	259,091	50	1st Qtr.	1,746,190	3,211,532	202,941	242,318
Dec.	44,485	67,828	0	Sept.	146,405	480,704	81,605	103,334
Jan.	49,000	64,908	0	Oct.	481,803	755,918	45,908	61,834
Feb.	72,887	93,576	0	Nov.	511,546	736,945	54,732	57,802
2nd Qtr.	166,372	226,312	0	2nd Qtr.	1,139,754	1,973,567	182,245	222,970
Mar.	121,254	129,375	0	Dec.	1,046,665	1,322,822	50,978	64,850
Apr.	4,185	15,705	1,802	Jan.	702,837	977,405	48,718	56,241
May	74,202	84,856	0	Feb.	245,660	680,313	46,740	58,823
3rd Qtr.	199,641	229,936	1,802	3rd Qtr.	1,995,162	2,980,540	146,436	179,914
June	11,404	16,394	0	Mar.	958,739	1,536,331	68,318	91,744
July	20,221	26,082	394	Apr.	174,456	658,919	68,142	88,969
Aug.	108,026	112,586	0	May	1,151,699	1,476,137	108,118	122,956
4th Qtr.	139,651	155,062	394	4th Qtr.	2,284,894	3,671,387	244,578	303,669
Total	720,731	870,401	2,246	Total	7,166,000	11,837,026	776,200	948,871
1980/81				1980/81				
Sept.	174,580	251,525	17	June	620,387	1,007,100	208,364	217,350
Oct.	62,982	91,027	0	July	475,033	897,820	99,739	117,566
Nov.	54,852	119,771	7,143	Aug.	198,458	613,721	138,041	150,113
1st Qtr.	292,414	462,323	7,160	1st Qtr.	1,293,878	2,518,641	446,144	485,029
Dec.	815	14,058	0	Sept.	576,818	994,834	103,180	114,358
Jan.	981	41,791	0	Oct.	418,748	716,432	78,330	92,721
Feb.	1,471	117,558	1,429	Nov.	272,608	649,066	37,899	44,456
2nd Qtr.	3,267	173,407	1,429	2nd Qtr.	1,268,174	2,360,332	219,409	251,535
Mar.	43,305	114,750	1,125	Dec.	616,398	971,698	68,867	73,711
Apr.	1,810	41,432	16	Jan.	405,615	753,860	48,185	83,723
May	503	56,863	0	Feb.	502,852	786,383	72,464	90,183
3rd Qtr.	45,618	213,045	1,141	3rd Qtr.	1,524,865	2,511,941	189,516	247,617
June	407,509	418,284	39	Mar.	687,319	1,176,303	67,501	75,690
July	48,187	60,912	0	Apr.	388,038	662,947	100,117	105,706
Aug.	51,275	57,174	16	May	702,898	975,666	109,205	128,927
4th Qtr.	506,971	536,370	55	4th Qtr.	1,778,255	2,814,916	276,823	310,323
Total	848,270	1,385,145	9,785	Total	5,865,172	10,205,830	1,131,892	1,294,504

See footnotes at end of table.

Continued--

Appendix table 13--Corn, sorghum, barley, and oats imports, 1975/76 to date 1/--Continued

Year and month	Corn		Sorghum	Year and month	Barley		Oats	
	Grain only	Total			Grain only	Total	Grain only	Total
	Bushels				Bushels			
1981/82				1981/82				
Sept.	47,232	50,064	0	June	610,314	807,773	100,775	117,252
Oct.	54,527	85,484	0	July	338,217	528,962	65,137	86,099
Nov.	8,426	71,390	0	Aug.	160,069	369,781	53,075	60,145
1st Qtr.	110,185	206,938	0	1st Qtr.	1,108,600	1,706,516	218,987	263,496
Dec.	158,826	231,084	167	Sept.	318,906	648,411	76,882	83,979
Jan.	321	32,702	0	Oct.	181,471	437,924	60,349	69,425
Feb.	118	105,527	15	Nov.	647,471	896,666	70,277	81,798
2nd Qtr.	159,265	369,313	182	2nd Qtr.	1,147,848	1,983,001	207,508	235,202
Mar.	1,063	116,202	199	Dec.	892,812	1,086,699	60,553	70,180
Apr.	4,900	20,978	0	Jan.	780,039	989,703	30,724	43,110
May	34,328	54,210	106	Feb.	844,258	1,052,933	31,463	40,939
3rd Qtr.	40,291	191,390	305	3rd Qtr.	2,517,109	3,129,335	122,740	154,229
June	217,319	249,153	6,389	Mar.	487,592	690,770	41,105	67,490
July	29,526	45,153	0	Apr.	983,354	1,276,341	336,288	344,204
Aug.	89	6,720	9,873	May	631,815	824,440	557,422	572,517
4th Qtr.	246,934	301,026	16,262	4th Qtr.	2,102,761	2,791,551	934,815	984,211
Total	556,675	1,068,667	16,749	Total	6,876,318	9,610,403	1,484,050	1,637,138
1982/83				1982/83				
Sept.	57,841	83,885	5,440	June	1,706,202	1,890,855	173,860	192,633
Oct.	36,755	63,827	38,834	July	1,602,675	1,808,382	311,531	322,304
Nov.	153,521	184,648	3,969	Aug.	578,914	869,862	157,066	186,560
1st Qtr.	248,117	332,360	48,243	1st Qtr.	3,887,791	4,569,099	642,457	701,497
Dec.	52,888	81,987	2,673	Sept.	271,038	520,052	42,950	67,955
Jan.	5,346	25,718	0	Oct.	118,788	375,818	41,249	48,694
Feb.	383	20,320	0	Nov.	901,290	1,166,105	69,839	82,915
2nd Qtr.	58,617	128,025	2,673	2nd Qtr.	1,291,116	2,061,975	154,038	199,564
Mar.	52,592	116,099	24	Dec.	210,376	359,493	80,919	101,512
Apr.	4,472	34,644	0	Jan.	411,890	602,902	327,193	343,005
May	29,196	49,197	0	Feb.	573,023	702,910	346,452	361,453
3rd Qtr.	86,260	199,940	24	3rd Qtr.	1,195,289	1,665,305	754,564	805,970
June	72,972	79,436	29	Mar.	695,950	855,026	688,400	846,946
July	1,489	8,400	0	Apr.	748,297	869,229	441,625	461,343
Aug.	21,394	29,572	0	May	532,160	644,747	830,870	849,348
4th Qtr.	95,855	117,408	29	4th Qtr.	1,976,407	2,369,002	1,960,895	2,157,637
Total	488,849	777,733	50,969	Total	8,350,603	10,665,381	3,511,954	3,864,668
1983/84				1983/84				
Sept.	187,378	224,236	55	June	984,175	1,076,280	1,352,013	1,374,965
Oct.	74,362	103,908	0	July	697,624	811,948	4,040,293	4,067,425
Nov.	135,991	181,386	0	Aug.	613,639	872,632	3,759,037	3,776,309
1st Qtr.	397,731	509,530	55	1st Qtr.	2,295,438	2,760,860	9,151,343	9,218,699
Dec.	10,484	58,924	0	Sept.	406,495	681,755	2,494,421	2,511,830
Jan.	301,147	361,028	0	Oct.	152,380	432,289	2,066,649	2,107,494
Feb.	238	164,021	0	Nov.	30,350	257,914	1,517,183	1,551,431
2nd Qtr.	311,869	583,973	0	2nd Qtr.	589,225	1,371,958	6,078,253	6,170,755
Mar.	55,570	310,958	0	Dec.	636,688	805,125	1,224,336	1,262,960
Apr.	421,092	460,456	0	Jan.	305,982	470,695	1,379,602	1,388,291
May	9,899	205,026	0	Feb.	105,250	246,267	3,637,066	3,665,607
3rd Qtr.	486,561	976,440	0	3rd Qtr.	1,047,920	1,522,087	6,241,004	6,316,858
June	134,071	176,922	9	Mar.	292,509	445,810	5,560,632	5,580,005
July	368,517	372,316	141,963	Apr.	418,999	581,084	1,940,376	1,958,505
Aug.	8,062	15,913	0	May	401,076	404,011	943,825	961,346
4th Qtr.	510,650	565,151	141,972	4th Qtr.	1,112,584	1,430,905	8,444,833	8,499,856
Total	1,706,811	2,635,094	142,027	Total	5,045,167	7,085,810	29,915,433	30,206,168

See footnotes at end of table.

Continued--

Appendix table 13--Corn, sorghum, barley, and oats imports, 1975/76 to date 1/--Continued

Year and month	Corn		Sorghum	Year and month	Barley		Oats	
	Grain only	Total			Grain only	Total	Grain only	Total
	Bushels				Bushels			
1984/85				1984/85				
Sept.	116,290	127,399	0	June	920,819	1,054,291	305,312	322,345
Oct.	260,438	317,134	0	July	722,362	883,625	1,469,282	1,490,031
Nov.	345,944	440,702	0	Aug.	1,023,658	1,165,980	217,465	234,276
1st Qtr.	722,672	885,235	0	1st Qtr.	2,666,839	3,103,896	1,992,059	2,046,652
Dec.	41,045	134,862	120,673	Sept.	284,510	466,491	3,771,243	3,786,897
Jan.	41,925	147,551	0	Oct.	276,438	505,461	3,449,893	3,462,452
Feb.	0	81,696	0	Nov.	300,744	591,477	1,485,364	1,494,579
2nd Qtr.	82,970	364,109	120,673	2nd Qtr.	861,692	1,563,429	8,706,500	8,743,928
Mar.	15,777	93,686	0	Dec.	1,640,951	1,899,683	4,119,279	4,138,000
Apr.	9,264	38,751	0	Jan.	358,752	618,802	4,035,973	4,095,972
May	824,177	936,859	0	Feb.	356,654	688,930	4,017,603	4,092,731
3rd Qtr.	849,218	1,069,296	.0	3rd Qtr.	2,356,357	3,207,415	12,172,855	12,326,703
June	60,875	944,203	0	Mar.	537,365	905,566	3,857,568	3,900,423
July	1,428	39,177	0	Apr.	939,773	1,166,350	5,170,327	5,257,192
Aug.	15,836	135,868	0	May	60,460	160,312	1,728,469	7,008,343
4th Qtr.	78,139	1,119,248	0	4th Qtr.	1,537,598	2,232,228	10,756,364	16,165,958
Total	1,732,999	3,437,888	120,672	Total	7,422,486	10,106,968	33,627,778	39,283,241
1985/86				1985/86				
Sept.	8,086	33,974	0	June	340,425	588,237	1,728,933	1,757,614
Oct.	314,654	350,199	0	July	251,910	478,428	1,889,404	1,931,401
Nov.	540,018	600,046	1,429	Aug.	61,653	345,756	825,818	834,833
1st Qtr.	862,758	984,219	1,429	1st Qtr.	653,988	1,412,421	4,444,155	4,523,848
Dec.	121,966	258,092	0	Sept.	109,312	347,927	1,288,425	1,304,864
Jan.	374,481	483,279	0	Oct.	872,324	1,087,159	1,256,991	1,264,610
Feb.	456,976	540,101	0	Nov.	339,674	591,311	1,672,252	1,678,864
2nd Qtr.	953,423	1,281,472	0	2nd Qtr.	1,321,310	2,026,397	4,217,668	4,248,338
Mar.	369,991	416,011	0	Dec.	592,242	689,112	3,210,457	3,232,191
Apr.	623,207	662,745	630	Jan.	528,661	935,239	3,264,356	3,284,460
May	1,212,047	1,240,983	0	Feb.	1,413,559	1,589,598	2,394,906	2,418,051
3rd Qtr.	2,205,245	2,319,739	630	3rd Qtr.	2,534,462	3,213,949	8,869,719	8,934,702
June	1,765,143	1,774,942	0	Mar.	261,745	443,882	2,336,953	2,366,047
July	2,994,897	3,082,335	797	Apr.	385,235	616,253	3,574,782	3,591,060
Aug.	1,116,694	1,139,076	0	May	1,088,551	1,276,845	3,795,409	3,822,076
4th Qtr.	5,876,734	5,996,353	797	4th Qtr.	1,735,531	2,336,980	9,707,144	9,779,183
Total	9,898,160	10,581,783	2,856	Total	6,245,291	8,989,747	27,238,686	27,486,071
1986/87				1986/87				
Sept.	311,213	332,783	6,329	June	1,296,495	1,501,548	5,325,371	5,345,316
Oct.	66,792	107,949	0	July	15,140	223,046	1,841,943	1,868,602
Nov.	333,201	353,750	33	Aug.	19,469	210,558	1,537,423	1,559,704
1st Qtr.	711,206	794,482	6,362	1st Qtr.	1,331,104	1,935,152	8,704,737	8,773,622
Dec.	66,353	131,009	0	Sept.	75,927	307,474	846,095	879,869
Jan.	85,979	134,935	0	Oct.	31,578	207,980	1,262,426	1,292,827
Feb.	14,207	52,622	86	Nov.	926,059	1,193,914	2,695,161	3,342,153
2nd Qtr.	166,539	318,566	86	2nd Qtr.	1,033,564	1,709,368	4,803,682	5,514,849
Mar.	29,812	63,602	0	Dec.	173,536	310,750	1,241,736	1,261,139
Apr.	400,056	428,391	0	Jan.	392,962	681,307	3,981,067	4,020,146
May	19,009	30,652	0	Feb.	625,953	772,737	3,994,932	4,027,553
3rd Qtr.	448,877	522,645	0	3rd Qtr.	1,192,451	1,764,794	9,217,735	9,308,838
June	326,401	339,131	0	Mar.	1,808,103	1,888,079	2,277,619	2,300,061
July	32,223	48,591	197	Apr.	508,133	591,606	3,401,071	3,434,844
Aug.	71,486	471,582	0	May	792,379	849,842	3,951,545	3,988,454
4th Qtr.	430,110	471,582	197	4th Qtr.	3,108,615	3,329,527	9,630,235	9,723,359
Total	1,756,732	2,107,275	6,645	Total	6,665,734	8,738,841	32,356,389	33,320,668

See footnotes at end of table.

Continued--

Appendix table 13--Corn, sorghum, barley, and oats imports, 1975/76 to date 1/--Continued

Year and month	Corn		Sorghum	Year and month	Barley		Oats	
	Grain only	Total			Grain only	Total	Grain only	Total
	Bushels				Bushels			
1987/88				1987/88				
Sept.	130,361	151,725	0	June	683,655	895,759	3,730,421	3,760,272
Oct.	354,333	373,790	24	July	195,998	445,492	1,717,932	1,735,424
Nov.	77,145	101,481	15	Aug.	220,222	434,668	1,541,932	1,582,741
1st Qtr.	561,839	626,997	39	1st Qtr.	1,099,875	1,775,920	6,990,285	7,078,437
Dec.	246,126	298,521	0	Sept.	1,061,243	1,396,437	1,712,779	1,744,204
Jan.	126,012	167,032	0	Oct.	926,329	1,222,581	1,270,484	1,372,822
Feb.	332,569	388,773	19	Nov.	876,498	1,209,701	5,106,952	5,148,944
2nd Qtr.	704,707	854,325	19	2nd Qtr.	2,864,070	3,828,720	8,090,215	8,265,970
Mar.	593,592	683,203	12	Dec.	1,146,248	1,384,778	2,537,116	2,566,987
Apr.	662,637	739,543	50	Jan.	1,846,528	2,038,574	4,086,315	4,154,507
May	113,606	140,762	0	Feb.	1,318,218	1,605,421	9,164,122	9,210,252
3rd Qtr.	1,369,835	1,563,509	62	3rd Qtr.	4,310,994	5,028,773	15,787,553	15,931,747
June	347,181	376,601	0	Mar.	1,163,560	1,280,709	6,426,933	6,482,646
July	257,479	275,042	0	Apr.	986,537	1,063,805	3,701,098	3,737,802
Aug.	169,701	207,314	7,229	May	876,452	961,089	4,721,106	4,756,988
4th Qtr.	774,361	858,958	7,229	4th Qtr.	3,026,549	3,305,603	14,849,137	14,977,436
Total	3,410,742	3,903,789	7,350	Total	11,301,488	13,939,016	45,717,190	46,253,590
1988/89				1988/89				
Sept.	148,437	177,913	0	June	1,596,106	1,700,185	5,680,015	5,772,502
Oct.	296,701	308,058	3,673	July	930,207	1,029,127	2,276,583	2,365,501
Nov.	180,789	233,514	0	Aug.	317,223	417,363	4,298,356	4,485,006
1st Qtr.	625,927	719,485	3,673	1st Qtr.	2,843,536	3,146,676	12,254,954	12,623,008
Dec.	106,151	173,241	0	Sept.	240,729	365,319	2,059,442	2,367,645
Jan.	307,023	723,699	0	Oct.	402,245	555,196	3,995,388	4,239,340
Feb.	178,260	591,385	15,130	Nov.	1,523,621	1,651,752	5,834,991	6,184,617
2nd Qtr.	591,434	1,488,325	15,130	2nd Qtr.	2,166,595	2,572,267	11,889,821	12,791,602
Mar.	420,381	742,935	0	Dec.	490,420	578,085	4,696,591	5,153,441
Apr.	633,060	845,387	5	Jan.	729,443	838,489	6,100,483	6,906,243
May	162,021	356,329	0	Feb.	1,627,551	1,720,819	9,313,487	10,172,629
3rd Qtr.	1,215,462	1,944,651	5	3rd Qtr.	2,847,414	3,137,394	20,110,561	22,232,313
June	33,363	212,637	14	Mar.	762,924	851,359	7,169,256	8,042,377
July	223,459	382,968	0	Apr.	753,742	857,654	4,750,564	5,431,135
Aug.	93,469	348,056	0	May	1,136,714	1,239,385	6,723,912	7,307,316
4th Qtr.	350,292	943,661	14	4th Qtr.	2,653,380	2,948,399	18,643,732	20,780,828
Total	2,783,115	5,096,121	18,822	Total	10,510,925	11,804,736	62,899,069	68,427,752
1989/90				1989/90				
Sept.	38,078	278,865	0	June	1,649,125	1,745,195	3,146,832	3,791,155
Oct.	307,119	553,242	0	July	571,185	661,468	6,440,929	6,730,677
Nov.	297,019	545,010	0	Aug.	1,356,499	1,456,086	7,372,277	7,823,880
1st Qtr.	642,217	1,377,116	0	1st Qtr.	3,576,809	3,862,748	16,960,038	18,345,711
Dec.	196,134	568,554	0	Sept.	263,515	360,996	5,871,691	6,236,194
Jan.				Oct.	204,334	283,661	4,460,867	4,779,170
Feb.				Nov.	1,517,596	1,674,049	7,146,334	7,452,067
2nd Qtr.				2nd Qtr.	1,985,445	2,318,706	17,478,892	18,467,431
Mar.				Dec.	2,157,989	2,471,341	13,163,137	13,441,248
Apr.				Jan.				
May				Feb.				
3rd Qtr.				3rd Qtr.				
June				Mar.				
July				Apr.				
Aug.				May				
4th Qtr.				4th Qtr.				
Total				Total				

1/ Corn includes grain only (yellow dent corn, other), seed, and cornmeal. Sorghum is grain only. Barley includes grain only barley for malting, other), pearl barley, milled and malting. Oats include grain (hulled or unhulled), unhull oats fit and unfit for human consumption, and oatmeal fit for human consumption.

Source: Bureau of the Census, U.S. Department of Commerce.

Appendix table 14--Grain protein feeds: Production, exports, and stocks by months, United States, 1970-89

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
						1,000 short tons							
Corn gluten feed and meal:													
Production--													
1970	112.7	157.5	144.1	141.3	133.1	122.7	154.2	139.1	162.6	157.1	148.1	147.8	1720.3
1971	153.4	165.0	130.5	126.1	131.7	141.5	162.7	151.1	165.0	158.9	155.8	155.9	1797.6
1972	155.9	169.9	163.4	155.5	154.6	157.0	159.9	180.8	180.2	178.5	183.8	218.2	2057.7
1973	175.5	202.7	173.3	172.4	174.2	153.7	202.2	178.4	187.2	171.3	168.8	177.7	2137.4
1974	188.7	191.0	172.4	182.6	203.1	192.3	197.0	193.7	215.7	203.5	196.1	205.6	2341.7
1975	213.1	227.9	203.1	185.9	208.6	196.1	200.3	224.3	214.6	220.0	209.4	226.5	2529.8
1976	237.6	213.8	218.0	193.6	185.0	201.9	236.3	242.4	239.9	243.6	218.8	255.9	2686.8
1977	247.8	251.6	217.8	224.6	215.3	226.7	259.2	247.0	270.0	274.2	276.1	279.3	2989.6
1978	278.7	286.0	243.3	249.3	208.7	222.1	289.1	237.8	318.3	300.7	287.7	287.6	3209.3
1979	295.7	331.5	317.7	308.7	297.1	294.8	289.3	281.4	272.3	280.6	292.1	262.8	3524.0
1980	271.7	307.0	281.0	286.7	278.7	262.6	324.0	295.9	366.4	374.2	356.2	324.4	3728.8
1981	342.9	319.0	319.2	310.6	312.5	299.5	372.1	349.3	351.0	362.7	352.3	388.2	4079.3
1982	384.1	351.0	401.6	336.7	325.3	358.8	386.6	397.4	387.0	434.9	397.9	455.9	4617.2
1983	442.0	436.9	407.3	399.1	382.9	326.2	516.7	548.8	507.1	471.2	517.8	495.7	5451.7
1984	450.0	445.1	454.0	461.6	284.6	410.2	507.3	492.9	553.6	538.3	558.1	554.5	5710.2
1985	527.4	436.1	383.9	398.6	437.0	430.2	451.7	467.9	481.2	518.3	539.8	521.3	5593.4
1986	502.6	507.2	459.2	465.0	489.8	452.8	527.3	505.7	511.5	529.6	548.6	533.7	6033.0
1987	522.5	517.2	443.9	508.2	461.5	473.6	551.9	528.7	579.9	564.9	561.7	637.6	6351.7
1988	628.8	543.1	531.8	514.6	547.9	511.8	606.8	600.8	632.4	616.7	636.5	576.7	6947.9
1989	561.1	530.1	502.2	NA									
Exports (feed and meal)--													
1975	110.4	79.5	71.0	111.1	79.0	88.5	89.0	116.6	96.1	94.5	88.9	79.4	1104.0
1976	83.3	113.9	96.4	121.2	110.8	56.7	138.1	214.5	113.7	108.8	118.3	141.6	1417.3
1977	324.7	146.9	173.4	79.1	183.2	117.8	128.8	178.4	94.5	182.6	180.3	123.1	1912.9
1978	209.4	69.3	185.0	184.2	105.1	127.3	148.8	199.4	165.6	327.7	143.6	198.1	2063.5
1979	177.8	246.3	157.7	205.3	197.4	207.1	231.0	163.1	302.1	227.2	192.0	222.4	2529.4
1980	361.5	239.6	190.8	266.4	210.4	201.2	299.4	362.2	195.5	189.6	301.4	291.9	3109.9
1981	212.9	350.0	237.7	220.5	187.1	194.0	297.9	322.8	320.5	205.9	303.5	229.7	3082.5
1982	212.8	280.0	294.3	297.0	295.5	362.6	355.2	532.7	275.4	303.5	317.1	257.0	3783.1
1983	386.8	304.7	312.6	259.0	410.9	263.5	497.8	330.2	221.1	301.8	366.6	384.8	4039.8
1984	266.4	244.3	428.7	283.3	279.5	217.9	398.9	348.2	273.2	302.5	242.0	357.1	3642.0
1985	347.5	405.9	347.1	306.6	397.9	386.7	439.3	388.4	280.7	321.7	351.5	456.7	4430.0
1986	426.4	360.9	357.2	490.9	492.3	327.1	519.3	420.5	398.4	346.3	350.9	267.6	4757.7
1987	431.1	490.9	385.1	437.8	315.0	339.2	519.6	393.0	405.3	336.0	323.4	339.1	4715.5
1988	532.7	402.6	590.9	418.3	416.7	410.1	507.2	515.6	486.9	427.1	385.7	517.3	5611.1
1989	424.3	598.8	409.9	NA									
Brewers' dried grains:													
Production--													
1970	29.0	27.8	25.1	27.2	26.8	24.9	32.1	32.1	32.4	36.0	34.9	32.0	360.3
1971	30.1	28.3	24.9	27.2	26.4	28.2	31.9	32.7	34.8	35.8	34.3	33.2	367.8
1972	31.1	28.0	24.2	23.0	26.3	26.0	30.4	30.9	34.0	31.8	35.6	36.5	357.8
1973	30.2	31.8	25.3	24.3	27.0	23.9	27.7	29.1	33.2	31.8	35.4	32.4	352.1
1974	27.0	26.7	24.1	23.1	26.1	23.1	25.0	32.0	32.0	35.9	36.4	31.7	343.1
1975	30.4	31.5	22.6	26.3	25.0	25.2	16.7	23.6	26.1	30.4	31.2	33.4	322.4
1976	28.3	26.0	18.8	19.6	21.4	19.3	28.3	29.5	28.3	30.9	29.6	23.7	303.7
1977	20.4	21.3	18.3	19.9	20.2	18.5	24.2	25.8	25.7	27.8	27.6	29.4	279.1
1978	23.7	19.9	17.1	20.7	21.4	24.9	30.3	28.2	29.3	31.7	27.5	30.4	305.1
1979	26.9	28.2	22.0	22.1	25.6	25.0	28.7	29.5	31.1	28.9	34.2	31.1	333.3
1980	32.8	24.3	21.2	24.6	24.6	23.7	28.9	27.9	30.6	30.3	29.8	29.8	328.5
1981	23.4	23.0	18.4	19.6	21.1	21.6	23.3	21.0	21.9	25.1	25.0	23.4	266.8
1982	19.8	18.2	14.8	15.8	19.0	16.1	16.6	21.6	20.4	20.0	20.5	17.6	220.4
1983	13.5	10.3	9.8	9.8	11.1	10.2	13.9	13.3	12.3	15.4	16.1	17.1	152.8
1984	10.1	11.9	9.5	12.0	13.6	12.1	13.9	14.5	14.8	14.6	14.0	13.2	154.2
1985	12.1	11.7	10.1	11.0	11.4	11.9	11.7	12.7	13.7	14.3	13.4	13.4	147.4
1986	12.7	10.1	10.0	11.7	13.6	12.7	13.8	13.6	15.3	16.3	16.2	14.7	160.7
1987	10.3	11.5	8.8	11.7	12.6	11.9	12.8	10.7	11.4	11.1	9.9	10.5	133.2
1988	9.5	4.5	7.0	8.8	8.6	9.6	11.1	10.9	11.5	11.7	11.3	11.8	116.3
1989	10.5	9.4	9.4	8.1									
Stocks, end of month--													
1970	5.1	5.3	6.9	5.3	5.3	5.1	4.7	4.1	4.2	5.2	6.8	6.4	
1971	5.6	4.7	3.9	3.8	3.8	3.6	3.5	4.1	4.0	5.8	6.4	7.0	
1972	5.6	3.8	3.0	3.1	2.4	2.6	2.7	3.1	2.4	2.5	3.0	3.0	
1973	2.0	2.5	2.0	2.3	2.4	2.6	2.0	2.4	3.0	3.8	3.5	3.4	
1974	2.9	2.9	2.7	2.4	2.3	2.0	2.7	2.0	2.2	2.0	2.2	2.7	
1975	2.5	2.5	2.6	1.5	1.5	1.3	1.2	1.5	2.5	2.2	2.3	2.4	
1976	2.2	2.2	1.9	1.4	1.4	0.8	1.4	1.3	3.1	3.1	3.3	1.9	
1977	1.4	1.3	1.6	1.0	1.7	1.4	1.9	1.8	1.1	2.0	2.9	1.7	
1978	1.8	1.3	0.9	1.0	1.0	1.4	1.0	1.1	1.4	1.0	1.9	0.9	
1979	1.0	1.4	1.0	0.6	0.8	1.0	1.2	1.7	2.0	2.1	1.9	1.8	
1980	1.7	0.9	1.3	0.8	1.1	1.2	1.4	2.0	2.0	1.9	1.3	1.0	
1981	1.2	1.0	1.3	0.5	1.1	1.0	1.4	1.2	1.5	1.3	1.1	1.5	
1982	0.8	1.4	0.9	0.8	1.4	0.7	0.6	0.6	0.9	0.6	0.7	0.7	
1983	0.4	0.3	0.2	0.4	0.4	0.5	0.8	0.7	0.7	0.9	1.0	0.8	
1984	1.0	0.9	0.7	0.8	0.6	0.5	0.8	1.1	0.9	1.1	0.9	0.9	
1985	1.1	0.7	0.6	0.7	0.5	0.6	0.6	0.7	0.7	0.8	0.7	1.0	
1986	0.7	0.4	0.7	0.3	0.4	0.5	0.4	0.3	0.6	0.6	0.6	0.7	
1987	0.4	0.3	0.1	0.1	0.2	0.3	0.2	0.2	0.5	0.4	0.3	0.2	
1988	0.4	0.1	0.1	0.1	0.1	0.2	0.0	0.3	0.3	0.3	0.3	0.3	
1989	0.2	0.1	0.2	0.2									

Continued--

Appendix table 14--Grain protein feeds: Production, exports, and stocks by months, United States, 1970-89--Continued

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
						1,000 short tons							
Distillers' dried grains:													
Production--													
1970	31.8	38.0	35.8	33.5	33.7	35.6	36.3	28.7	28.6	27.8	26.6	26.0	382.4
1971	31.5	34.6	33.7	35.2	37.8	36.4	38.6	36.9	37.6	35.8	27.9	22.0	408.0
1972	27.4	31.9	33.2	33.5	35.9	36.9	41.6	40.5	41.9	40.9	31.2	31.7	426.6
1973	31.7	33.8	36.9	37.3	50.5	37.8	41.7	42.1	42.4	37.2	33.9	31.7	457.0
1974	30.7	33.6	29.4	28.1	28.0	22.2	28.9	30.0	32.2	28.6	24.0	25.8	341.5
1975	29.8	38.0	32.6	32.5	32.2	29.1	35.5	37.2	32.5	38.7	28.2	28.6	394.9
1976	32.6	30.4	31.5	26.9	30.0	29.0	36.5	33.4	30.0	29.6	29.7	32.4	372.0
1977	37.6	35.6	29.9	33.5	33.5	30.1	28.4	32.4	37.4	38.6	33.3	34.0	404.3
1978	33.3	36.7	41.3	40.5	36.4	39.2	45.1	47.4	49.3	46.0	39.5	40.2	495.0
1979	35.1	35.0	56.4	40.3	38.4	40.6	47.7	44.9	49.2	41.9	30.3	33.3	493.1
1980	36.5	42.5	42.7	43.5	43.8	40.7	50.8	48.0	39.9	34.1	33.3	39.0	494.8
1981	41.9	41.8	39.1	43.4	35.1	35.7	40.6	34.3	40.7	47.7	41.3	45.1	486.7
1982	50.9	61.9	62.2	66.3	62.9	55.3	65.9	61.6	69.3	69.8	62.1	62.6	750.8
1983	50.8	61.6	29.9	44.3	53.9	54.2	57.6	56.4	56.9	55.8	51.6	50.8	623.8
1984	65.7	90.3	83.0	86.7	85.5	81.5	97.5	88.5	94.1	76.5	77.5	76.3	1003.1
1985	83.1	110.4	101.8	101.2	103.6	95.7	110.5	107.3	107.7	108.7	107.4	109.3	1246.7
1986	112.9	109.2	108.6	117.6	112.7	102.2	111.8	104.5	113.9	109.0	111.9	109.1	1323.4
1987	109.3	116.0	100.6	112.8	113.8	110.6	108.7	105.2	121.2	131.5	100.5	120.7	1350.9
1988	118.8	119.0	116.3	114.3	106.9	110.0	122.2	124.9	130.1	119.6	121.8	126.4	1430.3
1989	135.2	144.9	111.3	120.5									
Stocks, end of month--													
1970	1.9	2.2	2.2	1.7	1.6	2.4	1.5	1.2	1.6	0.9	1.1	2.0	
1971	1.7	3.3	4.1	2.3	2.2	2.5	2.0	2.7	2.9	1.9	1.8	1.0	
1972	1.2	1.1	1.3	1.6	1.8	1.9	2.1	4.2	2.7	3.8	2.8	1.7	
1973	3.4	3.2	2.9	3.4	2.0	3.0	4.9	3.6	2.9	4.4	1.7	1.3	
1974	3.0	1.0	1.7	1.4	1.5	2.3	2.8	4.0	5.3	5.4	4.7	4.8	
1975	4.1	4.1	4.5	1.9	2.1	2.4	3.9	7.0	4.3	4.9	2.5	2.6	
1976	2.2	4.5	3.4	2.2	1.4	2.0	2.6	2.9	2.8	2.2	3.8	4.0	
1977	4.7	3.8	1.7	1.7	2.9	4.3	3.6	5.0	4.3	2.0	2.0	1.4	
1978	1.8	2.0	2.2	2.8	2.0	2.3	3.4	4.4	4.0	3.4	2.1	3.6	
1979	2.9	4.9	2.7	2.1	3.8	3.1	5.6	4.5	4.3	2.7	2.0	4.1	
1980	2.7	3.2	4.1	2.3	4.4	4.3	5.2	3.2	2.6	3.9	3.0	3.2	
1981	3.8	4.1	3.9	2.4	2.9	3.2	4.2	4.2	3.4	5.5	5.0	4.6	
1982	5.5	4.1	4.2	4.5	5.6	4.6	7.4	7.3	6.6	6.9	6.6	4.4	
1983	4.8	6.3	6.0	4.4	4.2	6.4	8.3	7.8	8.1	11.6	9.2	5.6	
1984	10.9	10.3	10.5	12.0	9.1	8.1	10.2	9.4	10.8	10.9	10.4	13.2	
1985	12.1	12.4	12.7	9.0	7.3	7.8	8.7	8.1	6.1	9.2	6.0	8.1	
1986	6.6	12.3	9.1	15.4	11.0	19.9	10.2	9.6	13.7	8.8	12.0	11.5	
1987	15.1	14.2	14.2	8.7	16.1	13.2	5.2	5.6	14.2	16.0	12.2	17.6	
1988	14.1	20.8	21.8	28.1	17.0	8.2	4.6	7.1	7.2	12.2	45.7	17.6	
1989	11.1	11.3	10.4	13.4									

NA = Not available.
Sources: Corn Refiners Association, Inc.
Livestock and Grain Market News, Agricultural Marketing Service, USDA.

Appendix table 15--Feed grains and grain products used in the production of alcohol, distilled spirits, and beer, by months, 1975 to date 1/

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Total
						1 ,000 bushels							
						Corn and corn products							
Distilled spirits and alcohol:													
1975	1,621	2,161	1,962	1,688	1,554	1,316	1,985	2,333	1,974	1,957	1,292	1,250	21,093
1976	1,511	2,072	1,632	1,274	1,464	1,607	2,022	2,004	1,959	1,756	1,415	1,613	20,329
1977	1,884	1,705	1,444	1,459	1,451	1,495	1,628	1,912	1,995	1,746	750	1,624	19,093
1978	1,682	1,962	2,121	2,120	1,849	1,928	2,168	2,274	2,399	2,217	907	1,539	23,166
1979	1,920	2,377	2,501	1,696	2,149	2,174	2,825	2,795	2,738	2,153	910	1,565	25,803
1980	1,737	2,110	1,836	1,903	2,441	2,297	2,949	2,775	2,234	1,801	1,593	2,055	25,731
1981	2,240	2,621	2,066	2,550	2,433	2,869	4,024	3,630	3,369	3,261	4,075	3,528	36,666
1982	4,829	6,291	6,007	6,443	6,188	5,654	6,029	4,584	5,565	5,955	5,135	4,985	67,665
1983	3,898	3,892	3,599	3,446	3,690	3,800	4,261	4,238	3,902	3,091	2,571	3,035	43,422
1984	3,532	5,395	5,299	5,150	5,294	5,262	6,033	5,403	4,568	5,950	6,385	5,640	63,911
1985	5,691	5,997	2,927	2,071	2,243	2,162	2,788	3,114	4,679	4,571	3,816	3,989	44,048
1986	4,501	4,994	4,568	4,797	4,618	4,376	4,775	4,536	4,756	4,614	4,334	4,288	55,158
1987	4,481	4,522	3,721	3,917	3,907	3,862	5,010	4,443	4,530	4,199	3,526	3,550	49,669
1988	3,932	4,781	4,072	4,510	5,595	5,080	8,199	7,443	9,007	8,369	7,556	8,524	77,068
1989	9,603												
Beer:													
1975	4,069	3,598	3,258	3,651	3,435	3,259	4,234	4,503	5,369	5,584	4,875	4,728	50,563
1976	4,118	4,006	3,422	3,381	3,715	3,693	5,526	5,375	5,402	5,275	4,890	4,805	53,608
1977	3,900	3,679	3,644	3,793	3,960	3,904	4,555	4,708	4,788	5,017	4,655	4,892	51,495
1978	3,989	3,907	3,511	3,478	3,529	3,166	4,232	4,149	4,334	4,115	4,366	4,205	46,981
1979	3,547	3,546	3,191	2,991	3,463	3,786	4,049	4,011	4,376	4,335	4,627	4,353	46,275
1980	3,985	3,600	3,359	3,772	3,070	3,576	3,965	4,262	4,530	4,540	4,693	4,117	47,469
1981	3,586	3,547	2,959	3,102	3,389	3,447	4,015	3,998	4,178	3,677	3,829	3,878	43,605
1982	3,461	3,329	2,910	2,960	3,157	3,128	3,809	3,633	3,884	4,038	4,255	3,787	42,351
1983	3,421	3,127	2,857	2,362	3,180	3,408	4,049	4,234	4,169	3,963	3,994	3,569	42,332
1984	2,829	3,327	2,673	2,397	2,889	2,985	3,314	3,923	4,240	4,078	3,595	3,410	39,661
1985	3,220	3,259	2,649	2,498	3,191	3,157	3,469	3,929	4,120	3,838	3,770	3,110	40,210
1986	2,759	2,862	2,419	2,411	2,777	2,858	3,164	3,073	3,199	3,178	3,049	2,780	34,529
1987	2,734	2,362	2,213	2,103	2,620	2,671	2,948	3,384	3,258	3,212	2,714	2,672	32,890
1988	2,318	2,434	2,167	1,919	2,379	2,540	2,893	2,712	2,951	2,986	2,925	3,095	31,320
1989	2,381												
Total distilled spirits and beer:													
1975	5,690	5,759	5,220	5,339	4,989	4,575	6,219	6,836	7,343	7,541	6,167	5,978	71,656
1976	5,629	6,078	5,054	4,655	5,179	5,300	7,548	7,379	7,361	7,031	6,305	6,418	73,937
1977	5,784	5,384	5,088	5,252	5,411	5,399	6,183	6,620	6,783	6,763	5,405	6,516	70,588
1978	5,671	5,869	5,632	5,598	5,378	5,094	6,400	6,423	6,733	6,332	5,273	5,744	70,147
1979	5,467	5,923	5,692	4,687	5,612	5,960	6,874	6,806	7,114	6,488	5,537	5,918	72,078
1980	5,722	5,710	5,195	5,675	5,511	5,873	6,914	7,037	6,764	6,341	6,286	6,172	73,200
1981	5,826	6,168	5,025	5,652	5,822	6,316	8,039	7,628	7,547	6,938	7,904	7,406	80,271
1982	8,290	9,620	8,917	9,403	9,345	8,782	9,838	8,217	9,449	9,993	9,390	8,772	110,016
1983	7,319	7,018	6,456	5,808	6,870	7,208	8,309	8,471	8,071	7,054	6,565	6,604	85,754
1984	6,361	8,722	7,972	7,547	8,183	8,247	9,347	9,327	8,808	10,029	9,980	9,050	103,572
1985	8,911	9,255	5,576	4,569	5,434	5,318	6,257	7,043	8,800	8,410	7,585	7,099	84,257
1986	7,260	7,856	6,987	7,208	7,396	7,234	7,940	7,609	7,956	7,792	7,384	7,068	89,687
1987	7,215	6,884	5,934	6,020	6,526	6,533	7,958	7,827	7,788	7,411	6,240	6,222	82,559
1988	6,249	7,215	6,239	6,429	7,974	7,621	11,092	10,155	11,958	11,354	10,480	11,620	108,387
1989	11,984												
						Grain sorghum							
Distilled spirits and alcohol:													
1975	234	255	195	248	209	147	255	249	397	235	208	223	2,855
1976	252	277	224	201	212	214	200	212	246	237	245	225	2,745
1977	237	294	215	250	289	354	306	294	307	300	386	316	3,548
1978	308	363	369	368	366	320	375	353	347	296	331	349	4,145
1979	349	442	434	418	460	392	368	271	399	320	406	353	4,612
1980	331	379	415	399	199	275	379	340	380	381	357	370	4,205
1981	409	392	410	456	420	406	437	390	415	386	415	371	4,907
1982	269	231	378	389	356	355	241	264	299	347	322	253	3,704
1983	334	409	364	334	279	263	195	246	299	326	306	323	3,678
1984	362	1,311	1,207	1,503	1,085	835	1,117	1,110	943	516	474	523	10,984
1985	1,170	1,499	2,183	2,762	2,875	2,694	2,798	2,056	769	410	1,515	833	21,565
1986	467	315	370	423	519	363	360	471	421	337	444	318	4,808
1987	348	593	610	1,021	1,215	1,289	1,129	1,327	2,506	2,679	2,816	2,350	17,883
1988	2,161	2,816	2,496	2,287	1,670	405	506	465	473	484	303	541	14,606
1989	557												

See footnote at end of table.

Continued--

Appendix table 15--Feed grains and grain products used in the production of alcohol, distilled spirits, and beer, by months, 1975 to date--Continued

Year	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Total
						1,000 bushels							
						Barley and malt							
Distilled spirits and alcohol:													
1975	165	97	97	191	300	335	251	228	212	242	305	270	2,693
1976	263	147	173	209	231	193	212	227	246	332	293	287	2,813
1977	256	198	259	262	265	202	184	202	210	226	250	268	2,782
1978	228	127	240	269	289	321	340	256	294	335	352	363	3,414
1979	302	156	221	264	291	273	288	266	255	333	329	352	3,330
1980	222	118	180	195	241	164	230	320	297	358	345	321	2,991
1981	248	162	189	247	315	297	263	287	302	358	369	283	3,320
1982	235	199	185	455	309	274	225	252	292	315	288	248	3,277
1983	180	94	131	157	167	181	160	211	263	289	252	213	2,300
1984	105	56	110	162	215	240	167	192	194	180	156	182	1,959
1985	153	119	141	148	173	370	122	163	169	185	183	148	2,075
1986	127	95	77	114	140	117	115	161	167	253	225	200	1,792
1987	111	83	100	84	107	107	73	84	105	153	151	155	1,314
1988	123	93	118	152	185	189	180	196	155	240	268	286	2,186
1989	197	129	201	210									
Beer:													
1975	12,060	12,266	11,173	10,265	9,516	8,798	9,318	9,677	9,536	8,430	10,322	11,418	122,779
1976	11,988	12,297	12,271	10,969	10,304	8,567	8,504	9,244	8,693	11,930	12,164	12,240	129,171
1977	12,671	11,982	11,103	9,595	9,448	9,244	8,902	9,950	9,832	12,355	12,170	12,656	129,908
1978	13,059	13,051	14,020	11,494	12,094	9,849	10,142	10,792	10,523	13,284	12,614	13,326	144,248
1979	13,106	13,293	13,119	11,450	12,014	10,689	10,483	11,100	12,061	12,978	13,242	14,035	147,570
1980	14,191	14,721	14,148	12,860	12,106	10,548	10,616	10,622	11,595	12,857	13,678	14,451	152,393
1981	14,194	14,356	13,466	11,806	11,319	9,852	10,056	12,234	11,232	12,814	13,193	13,259	147,781
1982	13,628	12,430	12,590	11,537	11,251	10,061	9,981	11,113	10,640	12,862	12,724	13,350	142,167
1983	13,427	13,027	13,069	10,778	10,779	9,669	9,030	10,526	10,925	13,008	12,289	13,632	140,159
1984	13,333	13,751	12,456	10,396	10,939	9,383	9,669	11,161	10,357	12,253	13,101	13,390	140,190
1985	12,880	12,597	11,646	10,367	11,040	9,363	9,578	11,568	11,082	11,925	12,967	12,855	137,868
1986	13,472	13,535	11,904	10,862	11,163	9,719	10,387	11,627	11,126	12,739	12,150	12,669	141,352
1987	12,781	12,273	11,905	11,325	11,114	9,055	9,935	11,155	11,468	12,397	12,857	13,126	139,391
1988	13,161	12,914	12,264	10,955	11,123	10,299	9,689	11,386	11,111	11,898	12,530	13,168	140,499
1989	13,241	13,085	13,278	10,977									
Total distilled spirits and beer:													
1975	12,225	12,363	11,270	10,456	9,816	9,133	9,569	9,905	9,748	8,672	10,627	11,688	125,472
1976	12,251	12,444	12,444	11,178	10,535	8,760	8,716	9,471	8,939	12,262	12,457	12,527	131,984
1977	12,927	12,180	11,362	9,857	9,713	9,446	9,086	10,152	10,042	12,581	12,420	12,924	132,690
1978	13,287	13,178	14,260	11,763	12,383	10,170	10,482	11,048	10,817	13,619	12,966	13,689	147,662
1979	13,408	13,449	13,340	11,714	12,305	10,962	10,771	11,366	12,316	13,311	13,571	14,387	150,900
1980	14,413	14,839	14,328	13,055	12,347	10,712	10,846	10,942	11,892	13,215	14,023	14,772	155,384
1981	14,442	14,518	13,655	12,053	11,634	10,149	10,319	12,521	11,534	13,172	13,562	13,542	151,101
1982	13,863	12,629	12,775	11,992	11,560	10,335	10,206	11,365	10,932	13,177	13,012	13,598	145,444
1983	13,607	13,121	13,200	10,935	10,946	9,851	9,191	10,737	11,187	13,297	12,541	13,845	142,459
1984	13,438	13,807	12,567	10,557	11,155	9,623	9,836	11,353	10,550	12,433	13,256	13,572	142,149
1985	13,033	12,717	11,787	10,516	11,213	9,733	9,700	11,731	11,251	12,110	13,150	13,003	139,943
1986	13,599	13,630	11,982	10,976	11,304	9,835	10,502	11,788	11,292	12,993	12,375	12,869	143,144
1987	12,893	12,356	12,005	11,409	11,221	9,162	10,008	11,240	11,573	12,550	13,008	13,280	140,705
1988	13,285	13,007	12,382	11,107	11,308	10,488	9,869	11,582	11,266	12,138	12,798	13,454	142,685
1989	13,438	13,214	13,479	11,187									

NA = Not available.
1/ Mostly for beverage but also includes some industrial alcohol and may include some fuel alcohol.

Source: Department of the Treasury, Bureau of Alcohol, Tobacco and Firearms.

Appendix table 16--Hay: Production, harvested acreage, yield, prices received by farmers, and stocks

Year	Production: Alfalfa hay	Production: Other	Production: Total all hay	Harvested acreage	Yield per harvested acre	Season average price	Stocks: January 1	Stocks: May 1
	1,000 tons			1,000 acres	Tons	$/ton	1,000 tons	
1970	75,573	51,396	126,969	61,467	2.07	26.10	89,365	24,056
1971	77,285	51,847	129,132	61,355	2.10	28.10	87,651	22,200
1972	78,226	50,339	128,565	59,680	2.15	31.30	89,445	25,472
1973	78,805	55,412	134,217	61,828	2.17	41.60	88,790	24,311
1974	74,368	52,016	126,384	60,195	2.10	50.90	93,159	25,353
1975	78,183	54,214	132,397	61,353	2.16	52.10	84,687	18,505
1976	69,960	50,165	120,125	60,377	1.99	60.20	86,411	25,541
1977	80,814	51,397	132,211	60,988	2.17	53.70	77,651	19,540
1978	87,294	56,523	143,817	62,113	2.32	49.80	92,136	24,184
1979	88,110	59,197	147,307	61,279	2.40	59.40	99,024	30,108
1980	79,963	50,777	130,740	58,870	2.22	71.00	107,707	33,192
1981	83,696	58,824	142,520	59,599	2.39	67.30	91,689	25,374
1982	88,385	60,856	149,241	59,812	2.50	69.30	99,160	24,981
1983	82,255	58,483	140,738	59,694	2.36	75.80	103,996	28,118
1984	90,144	60,438	150,582	61,414	2.45	72.70	89,262	20,140
1985	85,121	63,598	148,719	60,461	2.46	67.60	100,533	26,826
1986	91,865	63,520	155,385	62,334	2.49	1/ 59.70	121,200	26,731
1987	84,225	63,232	147,457	60,133	2.45	65.10	117,882	32,333
1988	69,304	56,706	126,010	65,055	1.94	87.10	90,312	27,074
1989	77,208	68,237	145,445	63,395	2.29	NA	101,158	17,507

NA = Not available.
1/ Per program modification, hay stocks survey reference date has been changed from January 1 to December 1 beginning December 1, 1986.

Source: Agricultural Statistics Board, USDA.

Appendix table 17--Hay: Average prices received by farmers, United States, by months, 1970-89 1/

Year	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Average 2/
	$/ton												
1970	23.50	22.40	22.10	22.50	23.30	23.90	24.40	25.00	25.40	25.80	26.00	26.10	26.10
1971	25.60	24.60	24.10	24.30	24.50	24.90	25.30	26.10	29.20	29.70	29.00	28.00	28.10
1972	31.10	30.90	28.50	29.30	29.80	30.30	31.00	33.00	34.60	35.40	35.40	33.90	31.30
1973	37.50	35.20	36.30	39.00	43.10	46.20	46.80	46.00	47.10	47.10	45.40	44.40	41.60
1974	54.00	47.70	48.20	51.10	51.90	51.50	50.30	50.70	50.10	49.30	49.70	52.40	50.90
1975	56.30	53.60	51.20	51.00	50.80	50.30	50.20	51.60	52.70	54.30	54.10	54.10	52.10
1976	64.10	59.60	59.00	58.70	60.80	60.10	59.00	59.00	60.90	62.70	63.90	63.20	60.20
1977	68.10	61.30	56.80	52.50	50.00	48.20	48.40	49.50	50.50	51.80	51.40	51.40	53.70
1978	55.30	51.20	49.20	49.00	47.80	47.10	46.40	47.30	48.90	50.70	50.20	49.90	49.80
1979	65.60	58.00	56.00	57.50	59.00	60.80	58.90	60.10	59.10	60.00	57.40	60.10	59.40
1980	69.30	65.10	67.00	67.20	71.90	77.20	75.00	74.80	72.80	72.50	69.80	68.20	71.00
1981	75.30	66.90	64.00	63.90	62.70	64.80	65.40	65.70	67.90	69.90	69.50	73.30	67.30
1982	77.50	69.60	66.10	65.00	66.80	67.10	68.70	68.60	70.30	73.20	69.90	74.00	69.30
1983	78.10	72.70	71.20	71.20	74.70	76.80	75.10	76.70	76.60	78.70	79.40	79.80	75.80
1984	82.50	76.10	72.40	70.40	70.70	73.10	71.40	73.40	73.00	73.10	72.20	72.50	72.70
1985	80.80	70.20	67.90	65.20	67.10	67.50	64.30	65.40	65.80	66.70	67.10	66.20	67.60
1986	66.70	61.00	58.80	58.20	57.60	57.90	56.00	57.70	56.10	58.50	59.20	64.10	59.70
1987	71.70	62.90	61.20	62.70	64.10	64.20	61.10	63.20	62.80	64.60	67.20	71.40	65.10
1988	81.10	77.40	82.30	82.10	85.10	86.80	87.60	89.60	89.50	93.70	98.10	104.00	87.10
1989	104.00	94.80	85.40	82.80	85.00	85.70	83.60	84.20 3/	85.00				

1/ Prices reported for mid-month. 2/ U.S. season average prices weighted by marketings. 3/ Preliminary.

Source: Agricultural Prices, Agricultural Statistics Board, USDA.

Appendix table 18--Shipments of grain on the Illinois Waterway and the Missi

Crop year	Sept.	Oct.	Nov.	Dec.	Jan.	F
						Million
1981/82	3.4	3.4	4.6	3.9	1.2	0
1982/83	4.1	3.2	4.2	3.2	2.7	2
1983/84	5.3	4.9	5.7	4.4	1.0	3
1984/85	3.1	4.6	5.5	3.1	2.0	0
1985/86	2.4	2.6	4.3	3.3	1.8	1
1986/87	3.2	3.1	5.2	2.4	1.2	1
1987/88	3.3	3.8	3.9	2.9	1.9	2
1988/89	3.3	3.3	3.9	3.5	1.7	1
1989/90	3.0	3.9	4.7	2.5	2.2	

Source: Mississippi River Barge Traffic, U.S. Army Corps of Engineers, Roc

Appendix table 19--Barge rates for grain shipments to New Orleans, Louisiana

Crop year	Origin	Sept.	Oct.	Nov.	Dec.	Jan.
1984/85	Peoria, IL	7.77	8.07	6.71	5.79	7.34
	St Louis, MO	5.94	5.92	5.15	3.98	4.36
1985/86	Peoria, IL	5.26	7.93	6.48	9.08	7.22
	St Louis, MO	4.32	6.42	4.80	5.35	4.39
1986/87	Peoria, IL	8.37	10.54	6.64	5.16	4.95
	St Louis, MO	6.52	7.52	5.06	3.62	3.28
1987/88	Peoria, IL	8.66	9.04	7.38	5.68	7.32
	St Louis, MO	6.58	6.97	5.73	4.29	4.39
1988/89	Peoria, IL	9.80	10.32	7.88	8.81	7.32
	St Louis, MO	7.91	8.35	5.94	6.11	5.19
1989/90	Peoria, IL	5.89	10.49	10.87	12.15	9.13
	St Louis, MO	4.64	7.90	6.84	7.05	5.23

1/ Assumes all traffic on the Illinois River originates at Peoria, IL.

Source: Based on rates reported by Transportation Situation, Illinois Dept

Mississippi River (Locks 11-22), 1981/82-1989/90

Feb.	Mar.	Apr.	May	June	July	Aug.	Average
llion tons							
0.8	2.1	4.1	3.8	4.4	3.9	5.0	3.4
2.3	3.8	3.3	3.9	4.2	4.2	4.8	3.6
3.6	4.5	5.3	4.4	3.7	3.4	3.3	4.1
0.9	3.1	4.1	3.1	3.2	3.4	3.0	3.3
1.7	2.9	3.4	3.6	3.2	2.5	3.3	2.9
1.7	3.6	3.8	4.0	3.8	2.8	3.5	3.2
2.0	3.0	4.2	4.3	3.6	2.7	3.3	3.2
1.5	2.6	3.5	4.3	4.1	3.9	3.4	3.3
							3.3

, Rock Island District.

siana 1/

an.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
	--Dollars per ton--							
.34	6.87	5.73	5.08	4.33	4.76	4.83	4.63	5.99
.36	4.20	3.88	3.79	3.29	3.39	3.34	3.64	4.24
.22	5.64	4.28	4.13	3.90	3.70	3.70	6.21	5.63
.39	3.87	3.18	3.14	2.97	2.99	2.96	4.62	4.08
.95	5.23	6.96	5.88	5.44	6.16	6.15	6.46	6.50
.28	3.52	5.27	4.54	3.77	4.30	4.37	4.99	4.73
.32	6.89	8.16	7.25	6.19	9.86	9.79	7.61	7.82
.39	4.59	6.13	5.47	4.65	7.56	6.81	6.46	5.80
.32	7.26	7.08	5.85	5.34	6.13	4.92	5.13	7.15
.19	5.31	5.40	4.18	3.72	4.44	3.68	3.92	5.35
.13								9.71
.23								6.33

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Dept. of Agriculture.

Appendix table 20--Weekly average of rail car loadings of grain and soybeans,

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
						Carloads
1979/80	28,576	32,118	32,558	30,500	30,504	31,025
1980/81	32,127	24,114	31,450	28,106	34,396	31,108
1981/82	25,607	25,609	27,419	22,384	22,967	27,220
1982/83	20,321	29,523	25,350	21,888	24,700	26,318
1983/84	29,735	31,414	29,515	25,927	31,068	29,105
1984/85	29,162	24,482	28,587	25,441	25,310	23,688
1985/86	18,889	26,227	28,214	23,482	25,424	22,558
1986/87	27,329	33,605	29,877	24,827	23,086	26,663
1987/88	32,977	32,820	29,947	29,225	32,223	34,224
1988/89	29,014	30,628	27,140	27,120	30,324	29,890
1989/90	24,364	28,894	31,721	29,422	32,870	

Source: Association of American Railroads.

Appendix table 21--Rail freight rate index for grain, crop years 1979/80-1989
(December 1984=100)

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
1979/80	64.2	69.5	69.6	70.2	70.2	71.4
1980/81	78.3	78.8	78.8	79.2	83.1	84.1
1981/82	88.5	89.4	89.4	89.4	93.6	93.6
1982/83	93.0	93.0	93.0	93.0	93.9	93.9
1983/84	93.9	94.2	94.2	94.2	98.0	98.0
1984/85	98.4	100.0	100.0	100.0	100.0	100.0
1985/86	98.0	98.0	98.0	98.0	98.9	99.0
1986/87	99.2	98.5	98.5	97.8	98.3	98.3
1987/88	98.9	99.2	99.1	98.5	101.2	101.2
1988/89	109.3	108.3	108.5	108.2	109.2	109.2
1989/90	108.4	108.4	108.7	108.7	109.2	

Source: Bureau of Labor Statistics, U.S. Dept. of Labor.

eans, 1979/80-1989/90

eb.	Mar.	Apr.	May	June	July	Aug.	Average
oads							
,025	30,170	26,546	23,606	28,333	32,584	32,921	29,953
,108	27,657	23,490	21,291	28,014	22,162	26,152	27,506
,220	26,813	25,798	23,755	22,540	27,020	25,123	25,188
,318	26,807	21,243	20,849	21,393	27,942	27,461	24,483
,105	27,666	26,784	23,616	24,335	26,632	29,848	27,970
,688	23,340	20,164	17,715	24,724	22,662	20,218	23,791
,558	20,648	17,743	17,673	24,907	24,426	24,342	22,878
,663	27,134	25,046	26,189	32,154	32,257	30,825	28,249
,224	34,241	32,963	30,861	33,316	29,678	27,010	31,624
,890	31,766	30,144	25,942	27,305	25,055	25,905	28,353
							29,454

-1989/90

eb.	Mar.	Apr.	May	June	July	Aug.	Average
71.4	70.5	72.7	72.8	73.3	76.6	76.9	71.5
84.1	85.0	84.8	84.8	85.7	88.0	88.5	83.3
93.6	93.6	93.6	93.6	93.6	93.6	93.6	92.1
93.9	93.9	93.9	93.9	93.9	93.9	93.9	93.6
98.0	98.0	98.0	98.0	98.0	98.4	98.4	96.8
00.0	99.3	99.3	98.7	97.3	96.4	96.3	98.8
99.0	99.0	99.1	99.2	99.2	99.2	99.2	98.7
98.3	98.8	98.6	98.5	98.6	98.6	98.5	98.5
01.2	101.4	102.7	104.1	104.3	106.4	109.3	102.2
09.2	108.8	108.8	108.8	108.0	108.4	108.4	108.7
							108.7

Appendix table 22--Indexes of animal units, 1975/76-1989/90 1/

Year	Animal units consuming			
	Grain	High protein	Roughage	Grain rougha
1975/76	71.6	96.6	96.3	86.
1976/77	73.1	99.4	92.9	85.
1977/78	74.7	100.9	87.7	82.
1978/79	77.2	105.9	84.0	81.
1979/80	78.1	108.6	85.2	82.
1980/81	76.4	107.8	87.8	83.
1981/82	73.0	104.6	88.9	82
1982/83	75.2	105.4	87.7	82.
1983/84	74.6	105.7	86.7	81
1984/85	75.2	106.0	83.2	79
1985/86	74.5	107.1	80.5	77
1986/87	74.4	110.0	78.3	76
1987/88	76.7	112.7	76.3	76
1988/89	77.0	115.0	76.3	76
1989/90	77.8	117.9	76.3	76

1/ Index based upon feed consumed by one dairy cow in 1969-71 feeding years

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Grain & oughage	Grain consuming animal units				
	Dairy	Beef	Pork	Poultry	Other
Million units					
86.5	12.3	25.3	17.5	15.9	0.7
85.0	12.2	24.5	19.4	16.3	0.7
82.3	12.1	25.5	19.6	16.9	0.7
81.0	12.0	24.9	21.7	17.9	0.7
82.1	12.0	23.3	23.8	18.2	0.7
83.0	12.1	22.6	22.4	18.6	0.7
82.5	12.2	21.2	20.3	18.6	0.7
82.5	12.4	23.2	20.5	18.3	0.7
81.7	12.4	22.5	20.4	18.6	0.7
79.7	12.1	23.5	19.8	19.0	0.7
77.8	12.5	22.2	19.3	19.8	0.7
76.4	11.7	21.4	19.4	21.1	0.7
76.1	11.5	22.2	20.8	21.4	0.7
76.2	11.4	21.5	21.3	22.0	0.7
76.5	11.4	21.8	20.6	23.2	0.7

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